SESSIONAL PAPERS

VOL. XLIX.—PART IV.

THIRD SESSION

OF THE

FOURTEENTH LEGISLATURE

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PROVINCE OF ONTARIO

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No. 27 Report upon the Neglected and Dependent Children of the Province for the year 1916. Presented to the Legislature, April 6th, 1917. *Not Printed.*

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No. 32 Report of the Ontario Agricultural and Experimental Union for the year 1916. Presented to the Legislature, April 6th, 1917. *Printed.*

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No. 55 Report of the British Red Cross Fund for the year 1916. Presented to the Legislature, March 2nd, 1917. *Printed.*

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No. 59 Statement as to distribution of the Revised and Sessional Statutes for the year 1916. Presented to the Legislature, February 20th, 1917. *Not printed.*

No. 60 Return to an Order of the House of April 19th, 1916, that there be laid before the House:—A Return shewing, 1. If the T. & N. O. Railway quoted any special rate not authorized by its tariff or has been a party to the quotation of a special rate from any point or points in Ontario or Western Canada. 2. If so, to what shipper or shippers has such rate been given. Presented to the Legislature, February 20th, 1917. Mr. *Munro.* *Not Printed.*

No. 61 Copies of Orders-in-Council made under the authority of the Department of Education Act, or of the Acts relating to Public Schools, Separate Schools or High Schools. Presented to the Legislature, February 20th, 1917. *Not Printed.*

No. 62 Report of the Nickel Commission. Presented to the Legislature, March 26th, 1917. *Printed.*

No. 63 Return of an Address to His Honour the Lieutenant-Governor of the 16th February, 1917, praying that he will cause to be laid before this House, a Return:—1. Shewing all correspondence

(including telegrams) since January 1st, 1916, passing between the Government of the Province of Ontario or any member, officer or official thereof, and the Government of the Dominion of Canada and any officer or official thereof in reference to the machine guns purchased out of the moneys of the Province of Ontario. 2. All correspondence since January 1st, 1916, passing between the Government of the Province of Ontario, or any member, officer or official thereof, and the Imperial Government, and any officer or official thereof, in reference to machine guns purchased out of the moneys of the Province of Ontario. Presented to the Legislature, March 1st, 1917. Mr. *Bowman. Not Printed.*

No. 64 Return to an Order of the House of the 26th February, 1917, for a Return shewing:—1. How many charters or licenses have been issued to racing associations operating in Ontario since the year 1912. 2. What are the names of the racing associations or companies and the dates of the issue of the licenses or charters respectively. Presented to the Legislature, March 1st, 1917. Mr. *Carter. Printed.*

No. 65 Return to an Address to His Honour the Lieutenant-Governor of the 11th April, 1916, praying that he will cause to be laid before this House a Return shewing:—1. Copies of all letters or telegrams, since the 1st January, 1915, which have passed between the Government or any official or agent thereof, and the International Nickel Company or the Canadian Copper Company or any officers or officials thereof, in reference to the damages done to the property of the farmers and others interested in the lands adjacent to the plant of the Canadian Copper Company. 2. Of all letters and telegrams which have passed between the Government, or any officer or official thereof—and particularly the Departments of Lands, Forests and Mines and of Agriculture—and Mr. Chas. McCrea, M.P.P., of Sudbury, in reference to the matters aforesaid or the operations of the International Nickel Company or the Canadian Copper Company, and the damage being done to the property in the vicinity of the operations of the said companies; and particularly the correspondence between either of the Departments and Mr. McCrea and Mr. Ponton and Mr. Jarvis, Valuators for the Canadian Copper Company. 3. Of all Orders in Council withdrawing lands from sale for agricultural purposes, at the instance or suggestion of the Canadian Copper Company. Presented to the Legislature, March 2nd, 1917. Mr. *Carter, Printed.*

No. 66 Return to an Order of the House of the 19th February, 1917 for a Return shewing how many patients were regularly cared for in the Whitby Asylum during the year 1916. Presented to the Legislature, March 2nd, 1917. Mr. *Wigle. Printed.*

No. 67 Return to an Order of the House of the 23rd February, 1917, for a Return of copies, 1. Of the pay-rolls of the Industrial Department of the Reformatory for the Porvince of Ontario, commencing November 1st, 1915, and ending October 31st, 1916, specifying the nature of the services rendered by those whose names appear in the Return. 2. Of the monthly payments by the Industrial Department of the Reformatory for the Province of Ontario to persons whose names do not appear upon the monthly pay-roll of the Industrial Department, specifying the nature of the services rendered by those whose names appear in the Return. Presented to the Legislature, March 2nd, 1917. Mr. *Bowman*. *Not Printed.*

No. 68 Return to an Order of the House of the 3rd April, 1916, for a Return shewing: 1. The number of acres occupied by *bona fide* settlers on the lands purchased from the Government by Willis K. Jackson *et al.* under agreement bearing date the 14th day of June, 1912, particularizing the number of acres occupied each year since the date of the said agreement. 2. The number of settlers occupying such lands since the date of such agreement and the number respectively occupying the same for each year since the date of said agreement and the number of acres occupied by each settler. 3. The number of settlers who have lived up to the requirements of The Free Grant and Homestead Act and the regulations thereunder, and the number in default. 4. The number of farms required to be cleared by the Minister under Clause 4 of said agreement, and the actual number of such farms cleared, the amount of work performed, and the number and kind of buildings erected in accordance with the request of said Minister. 5. The number and extent of roads, bridges and other improvements, designating the nature of such improvements, required by the Minister to be done under Clause 5 of said agreement and the number and extent of such roads, bridges and other improvements completed in accordance with such request. 6. The number of schools and school buildings erected under Clause 6 of said agreement, and whether same are established and erected to the satisfaction of the Minister, also the location of such schools, particularizing those which are not satisfactory to the Minister and the reason for such dissatisfaction. 7. The amount of work required to be performed under Clause 7 of said agreement that has actually been performed, particularizing the nature and cost of such work, and the date each work was commenced and completed. 8. The number of acres cut over by the purchaser under Clause 8 of said agreement, and whether same cleared in accordance with the terms of said clause and to the satisfaction of the Minister; and whether the terms of said clause as to leaving 20 acres of wood for each farm have been complied with, and the kind of wood so left. 9. Whether all the timber cut by the purchaser has been manufactured in the townships of Kendry and Haggart,

and if not, the amount not so manufactured and the amount of timber disposed of outside of such townships, and to whom the same was sold. 10. The amount of timber that has been purchased from the settlers by the purchaser, and upon what terms were such purchases made; and how much and at what rate were the settlers paid for cutting and removing timber; and what was the rate charged to the settler for the use of the purchaser's teams. 11. The number and date of sales that have been made by the purchaser to settlers and the terms of such sales and copies of all agreements between such settlers and purchasers and as to whether the same have been approved of by the Minister. 12. The number of patents issued to settlers under Clause 13 of said agreement. 13. The extent of the lands upon which patents have been issued to the purchaser under Clause 14 of said agreement, and the nature and cost of the buildings built on same for which such patents granted. 14. All correspondence between the Government or any officer or official thereof and the purchaser or any of them, or any officer or official of such purchaser, and between the Government or any officer or official thereof and any settlers, relating to the whole or any part of the subject matter of the said agreement. Presetned to the Legislature, March 6th, 1917. Mr. *Lang*. *Not Printed.*

No. 69 Return to an Order of the House of the 16th February, 1917, for a Return shewing:—1. All statements furnished by the Canada Copper Company, International Nickel Company, Mond Nickel Company, and any other company producing nickel, under section 8 of The Mining Act, respecting taxation since the 1st of January, A.D. 1915. 2. All reports from any Government Mine Assessor, made under the provisions of The Mining Act, in respect to the mining operations of the Canada Copper Company, the International Nickel Company or the Mond Nickel Company, particularly with reference to the taxes to be paid by the said companies, or any of them, under The Mining Tax Act. 3. All correspondence since the 1st day of January, 1915, between the Minister of Lands, Forests and Mines, or the Provincial Treasurer, or any officer or official of the Government, and the Canada Copper Company, the International Nickel Company, the Mond Nickel Company, and any other companies producing nickel, or any officer or solicitor for or on behalf of the said companies, or any of them, with reference to the amount of taxes or royalties paid or to be paid by the said companies or any of them, to the Provincial Treasurer of the Province, in respect of the ore mined or the mining operations carried on by them in the Province of Ontario. Presented to the Legislature, March 16th, 1917. Mr. *Carter*. *Not Printed.*

No. 70 Return to an Order of the House of the 9th March, 1917, for a Return shewing:—1. The number, kind and cost of buildings comprised in the Burwash Prison Farm property. 2. What is the number of acres of land belonging to or included in the Bur-

wash Prison Farm property, and of such land, how many acres are under cultivation, and how many acres are used for the purpose of pasture. 3. How many prisoners are there at Burwash Prison Farm. 4. What is the number of employees at the Burwash Prison Farm, and what is the amount of salary paid to each employee. 5. Were cattle or other animals shipped from the Burwash Prison Farm in the year 1916, and if so, what was the number so shipped, the total value of such shipments and the amount paid as freight charges thereon. 6. Were cattle or other animals brought to the Burwash Prison Farm from other places in the year 1916, and if so, what was the number so brought, and what were the names of the places from which said cattle or other animals were brought. Presented to the Legislature, March 16th, 1917. Mr. *Mageau*. *Printed.*

No. 71 Return to an Order of the House of the 16th February, 1917, for a Return:—1. Shewing the names of all the Townsites established by the T. & N. O. Ry. Commission. 2. Shewing all the townsite lands sold by the T. & N. O. Ry. Commission on or after July 29, 1916, the towns in which they were situated, and the amounts received for each. Presented to the Legislature, March 20th, 1917. Mr. *Bowman*. *Not Printed.*

No. 72 Copies of contracts with The Kinleith Paper Company, Limited, St. Catharines, Ontario; The Georgetown Coated Paper Mills, Limited, Georgetown; The Provincial Paper Mills Company, Limited, Toronto; authorized by Order in Council dated February 20th, 1917. Presented to the Legislature, March 21st, 1917. *Printed.*

No. 73 Return to an Order of the House of the 19th February, 1917, for a Return shewing if the Canadian Northern Railway Company applied to the Minister of Lands, Forests and Mines to designate the lands or any part of the lands to be granted to the said railway as provided in section 3, 9 Edw. VII., chap. 71. 2. Has the Minister of Lands, Forests and Mines designated any such lands or any part of the same. 3. If such lands or any part of the same have been so designated, what is the total acreage so designated, and of what townships or part of townships does the same consist. 4. Have the said lands or any part of the same been surveyed. 5. If the said lands have not been so designated, why have they not been designated. Presented to the Legislature, March 21st, 1917. Mr. *Davidson*. *Printed.*

No. 74 Return to an Order of the House of the 23rd February, 1917, for a Return shewing:—1. What amounts have been paid and upon what dates since January 1st, 1916, to the firm of Gunn, Richards and Company, Production Engineers and Public Accountants of 43 Wall Street, 43 Exchange Place, New York, or to any one acting for them, or on their behalf, on account of any

Department of the Government. 2. What amounts, if any, are still owing to the said firm or any one acting for them or on their behalf. 3. What were the services rendered in respect to which such payments were made or liability incurred. 4. By what authority was the employment of the said firm authorized. Presented to the Legislature, March 21st, 1917. Mr. *Richardson. Not Printed.*

No. 75 Return to an Order of the House of the 19th February, 1917, for a Return shewing:—1. The total capital expenditure to the end of the fiscal year for all purposes in respect to the Guelph Prison Farm. 2. Any further capital expenditures contemplated, and if so, to what amount. 3. How many prisoners, on the average, have been accommodated at the Guelph Prison Farm during the year 1916. 4. How many prisoners are now at the Guelph Prison Farm for offences against the criminal law. 5. What was the average number of prisoners at the Guelph Prison Farm during the year 1916 for offences against the criminal law. Presented to the Legislature, March 28th, 1917. Mr. *Ferguson (Kent.) Printed.*

No. 76 Return to an Order of the House of the 28th March, 1917, for a Return shewing:—1. What was the total cost of the knitting plant installed at the Mercer Reformatory, Toronto. 2. From whom was such knitting plant purchased and what was the date of purchase. 3. When was the said knitting plant installed. 4. What amount was paid to operatives up to the 1st of March, 1917, for operating the said plant. 5. What is the value of the goods produced from the knitting plant. 6. Have the goods produced by the said plant been sold, and if so, to whom. Presented to the Legislature, March 29th, 1917. Mr. *Ferguson (Kent.) Not Printed.*

No. 77 Return to an Address to His Honour the Lieutenant-Governor of the 19th February, 1917, praying that he would cause to be laid before this House a Return:—1. Of copies of all correspondence passing between the Government of this Province, or any member, officer or official thereof, and the Government of the Dominion of Canada, or any officer or official thereof, in reference to the care of Returned Soldiers. 2. Of all correspondence passing between the Government of this Province, or any member, officer or official thereof, and the Government of the Dominion of Canada, or any officer or official thereof, in reference to the establishment of Convalescent Homes for the care of Returned Soldiers. 3. Of all correspondence passing between the Government of this Province, or any member, officer or official thereof, and the Government of the Dominion of Canada, or any officer or official thereof, in reference to the relations between the Soldiers' Aid Commission and the Military Hospitals Commission of the Army Medical Service Corps. Presented to the Legislature, April 2nd, 1917. Mr. *Rowell. Not Printed.*

No. 78 Return to an Order of the House of the 21st March, 1917, for a Return of copies: 1. Of all correspondence and documents at any time passing between the Director of Industries, Ontario Reformatory, and the Assistant Provincial Secretary, referring to Alexander McPherson, foreman, Ontario Reformatory Industries, and Fred. W. French, Assistant Director of Ontario Reformatory Industries, or either of them, or relating to any matters arising between the said Alexander McPherson and Fred. W. French. Presented to the Legislature, April 2nd, 1917. Mr. *Richardson*. *Not Printed.*

No. 79 Copies of all Orders-in-Council made under the authority of the Department of Education Act or of the Acts relating to Public Schools, Separate Schools or High Schools, passed since the opening of the present Session of the Legislative Assembly. (*See No.* 61.) Presented to the Legislature, April 2nd, 1917. *Printed.*

No. 80 Return to an Order of the House of the 30th March, 1917, for a Return shewing: 1. What has been the cost of the Ontario Nickel Commission since the 1st day of February, 1917: (*a*) For salaries or payments by way of remuneration or honorarium to each member of the Commission respectively; (*b*) For travelling expenses of each member of the Commission respectively; (*c*) For allowance in lieu of travelling expenses to each member of the Commission respectively; (*d*) For other purposes, specifying such purposes and amounts. 2. What honorarium, remuneration or salary is payable or to be paid to the members of the Commission other than G. T. Holloway. 3. Is the Chairman, G. T. Holloway, still in the Government employ at $20.000 *per* year and $10.00 *per* day in lieu of travelling expenses, and if so when will the obligation of the Government cease. 4. Are the travelling expenses of the said G. T. Holloway from Toronto to Great Britain to be paid by the Government in addition to the allowance made to him. 5. What were the services rendered by each of the following parties in respect of which payments were made to them for salary as shown in the Return of the 16th February, 1916, respectively: Professor George A. Guess, salary, $1,250; F. Clithero, salary, $388.54; G. W. Dixon, salary, $359.03; A. L. Clark, salary, $600.00; R. N. Dickson, salary, $485.00; A. Stanfield, salary, $200.00; E. M. Tozer, salary, $306.60; E. A. Wilson, salary, $210.73. Presented to the Legislature, April 4th, 1917. Mr. *Dewart*. *Not Printed.*

No. 81 Return to an Order of the House of the 19th March, 1917, for a Return of copies of all correspondence between the Government of Ontario or any Member, officer or official thereof, and the Devonshire Race Track Company or any member, officer or official thereof, and in particular the correspondence between J. T. White, Esq., Solicitor to the Department of the Provincial Treasurer, and Hon. Dr. Reaume. Presented to the Legislature, April 4th, 1917. Mr. *Wigle*. *Not Printed.*

No. 82 Return to an Order of the House of the 28th March, 1917, for a Return of:—1. Copies of: (1) Charter of the Gore Bay Riding and Driving Association. (2) Supplementary Letters Patent, dated 17th November, 1915, increasing capital stock to $25,000, and changing name to "Northern Riding and Driving Association." (3) Supplementary Letters Patent, dated 12th February, 1916, increasing capital stock to $200,000. 2. Copies of all annual returns made by the said company. 3. Copies of all correspondence, and documents filed with the Government on the application for the issue of said Supplementary Letters Patent. 4. Copies of application for license to the Provincial Treasurer, and all correspondence and communications in connection with the issue of said license to hold a race meeting at Windsor. Presented to the Legislature, April 6th, 1917. Mr. *Wigle*. *Not Printed.*

No. 83 Report of the Horticultural Experiment Station, Vineland Station, Ontario, 1906-1915. Presented to the Legislature, April 6th, 1917. *Printed.*

No. 84 Report of the Soldiers' Aid Commission of Ontario, 1916. Presented to the Legislature, April 6th, 1917. *Not Printed.*

No. 85 Return to an Order of the House of the 12th March, 1917, for a Return shewing what was the number of prisoners in all gaols, reformatories and prisons in the Province of Ontario, on the thirtieth day of September, 1916. Presented to the Legislature, April 6th, 1917. Mr. *Parliament*. *Not Printed.*

No. 86 Return to an Order of the House of the 26th March, 1917, for a Return shewing:—1. What was the total number of members of the Inside Civil Service of the Government of the Province of Ontario and the total number in each department thereof on the 31st day of July, 1914, the 31st day of July, 1916, and the 28th day of February, 1917, respectively. Presented to the Legislature, April 6th, 1917. Mr. *Elliott*. *Not Printed.*

No. 87 Return to an Order of the House of the 16th March, 1917, for a Return shewing:—1. What tenders were received for each and every of the lots advertised for sale by George W. Lee, Commissioner of the Temiskaming and Northern Ontario Railway in the "North Bay Times" on Thursday, October 12th, 1916. 2. Which of the said lots have been sold by the said George W. Lee, the Temiskaming and Northern Ontario Railway Commission or any officer or official thereof. 3. What were the prices and terms at and upon which each and every of the said lots were sold by the said George W. Lee, the said Commission or any officer or official thereof. 4. Which of the said lots sold by the said George W. Lee, the said Commission, or any officer or official thereof, within the municipalities of Porquis Junc-

tion. Matheson, Cochrane, and Englehart, or what proportion of each and every lot so sold lies within the municipalities. Presented to the Legislature, April 6th, 1917. Mr. *Mageau*. *Not Printed.*

No. 88 Return to an Order of the House of the 21st March, 1917, for a Return of copies:—1. Of all reports for the year ending October 31st, 1916, of the superintendents of each and all the asylums, government prisons and reformatories in Ontario. 2. Of letters between Assistant Provincial Secretary and Fred Hill, relating to the dismissal of the said Fred Hill from the staff of the Ontario Reformatory at Guelph. Presented to the Legislature, April 6th, 1917. Mr. *Griere*. *Not Printed.*

No. 89 Return to an Order of the House of the 16th February, 1917, for a Return shewing:—1. What amount has actually been paid since January 1st, 1916, for war purposes, by the Government, out of the proceeds of the Provincial War Tax. 2. For what particular purposes have such payments been made and what are the date of such payments. Presented to the Legislature, April 6th, 1917. Mr. *Bowman*. *Not Printed.*

REPORT

OF THE

Minister of Public Works

FOR THE

PROVINCE OF ONTARIO

FOR THE

TWELVE MONTHS ENDING 31st OCTOBER

1916

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:

Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty

1917

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TORONTO

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To His Honour, Sir John Strathearn Hendrie, K.C.M.G., C.V.O., a Colonel in the Militia of Canada, etc., etc., etc., Lieutenant-Governor of the Province of Ontario.

Sir,—I have the honour to submit to you, as required by Statute, the Annual Report on the works under the control of the Public Works Department, comprising the Reports of the Deputy Minister, the Architect, the Engineers, the Superintendent, and the Accountant of the Colonization Roads Branch, the Chief Inspector of Boilers, and the Accountant and Law Clerk, for the twelve months ending the 31st of October, 1916.

I have the honour to be, Sir,

Your obedient servant,

F. G. Macdiarmid,

Minister of Public Works and Highways.

Department of Public Works, Ontario,
February 26th, 1917.

REPORT

OF THE

Deputy Minister of Public Works

TORONTO, February 15th, 1917.

HONOURABLE F. G. MACDIARMID, *Minister of Public Works and Highways, Ontario.*

SIR,—I have the honour to transmit the annual reports of the Provincial Architect, the Provincial Engineer, and the Superintendent of Colonization Roads, also the statements of the Accountant of the Public Works Department, the Accountant of the Colonization Roads Branch, and the Secretary and Law Clerk, Public Works Department. These reports give in detail the works carried out by the Department during the fiscal year ending the 31st of October, 1916.

New Government House in Chorley Park was completed in December, 1915, when His Honour Sir John S. Hendrie, K.C.M.G., C.V.O., vacated the temporary residence on College street and took possession of the new residence. The new building will prove a fitting home for the representative of His Majesty in Ontario for many years to come. The site contains 14 acres of very valuable land, situated in the very best residential district of the city and will always be a valuable asset. A most critical examination of the building and grounds will fail to find a single feature that could be called extravagant. The material and workmanship are good, plain, simple, chaste, appropriate for their purpose, and not of expensive character. Full value has been received for every dollar expended. Credit is due to the Architect, Mr. F. R. Heakes, who has succeeded in erecting a building for the Governor's residence of which the Province may well be proud.

The office accommodation in the Parliament and Departmental buildings is quite inadequate for the public service. Four fine office rooms were fitted up on the fourth floor in the centre portion of the building, in space left unfinished when the buildings were first erected. It was found necessary to secure further office space, and a flat in the MacLean Publishing Company's building at 149 University Avenue was secured, which will relieve the congestion for a short time.

The buildings for the Hospital for Insane, Whitby, are nearing completion. One group of eight cottages, with a separate building for dining-room and kitchen, are completed and ready for occupation. Another similar group is well advanced. These will give accommodation for about 960 beds. The Power House and Central Heating Plant is also completed. This work has been done by the Provincial Secretary's Department, using prison and patient labour as far as practicable.

Additional cottages at Orillia for the care of the feeble-minded, which have been under construction for the past two seasons, have been completed. The old boiler house was much congested and had been altered and added to so often that it was deemed advisable to erect an entirely new boiler house rather than again make an addition to the old one.

At the Agricultural College, Guelph, the new dormitory for the maids has been completed. The Chemistry building has been remodelled and enlarged from the grant by the Federal Government for the advancement of Agriculture.

In the unorganized districts general repairs of the court-houses, gaols and registry offices has received attention. A new gaol at Sault Ste. Marie was completed and occupied in the month of October. The new registry office at Fort William was completed and furnished with the necessary filing equipment and is ready for occupation. The Prison Farm in Paipoonge Township near Fort William is developing satisfactorily. A new greenhouse is being erected and the lands are being put in cultivation under the direction of the Farm Director of the Provincial Secretary's Department. The farm at Burwash, twenty miles south of Sudbury, has an area of 35,000 acres. These farms have proved most beneficial to the prisoners and are an advertisement of the agricultural possibilities of the district which should result in increased settlement of the lands.

To conserve the resources of the Province for the prosecution of the war the expenditure on public works under the Provincial Engineer was limited to the urgent needs only. The maintenance and repairs of the locks at Port Carling, Huntsville and Magnetawan, and the bridges in those portions of the Province not populously settled, cost $36,207.46. In addition to the above, seventy-three bridges were constructed at a cost of $91,640.74. The larger ones were: Combermere bridge over the Madawaska River at the village of Combermere; Cross Lake bridge in Kenebec Township, replacing an old floating bridge with a permanent stone fill and two steel spans, (seven thousand five hundred dollars towards the cost of Cross Lake bridge being provided by the County of Frontenac); Stanley bridge over the Kaministiquia River at Stanley Junction; and Long Lake bridge in the Township of Stephenson, also replacing an old floating bridge. Sixteen drainage works were constructed by the Department at a cost of $25,274.75. Other items for equipment and for repairs to the dam at outlet of Lake of the Woods brought the expenditure on public works to $159,627.24, being slightly in excess of the expenditure for 1915, but much less than for several years previous to 1914.

During the year the Colonization Roads Branch constructed 143 miles of new roads and improved 1,175 miles of old roads at a cost of $253,539.11 to the Province. Of this sum $70,837.12 was paid to municipalities for work done under by-laws, the Government share being about one-half of the cost.

The Trades and Labour Branch Act passed at the last Session of the Legislature was by Order in Council dated the 6th day of July, 1916, placed under the direction of the Minister of Public Works. On the 24th day of August, Mr. Walter A. Riddell, Ph.D., was appointed Superintendent of the Branch, taking charge of the factory inspection, stationary engineers, labour bureau and boiler inspection branches, as set out in the Act. He has inaugurated a vigorous policy respecting employment bureaus, giving special attention to obtaining employment for munition workers.

The Public Roads and Highways Act was proclaimed on the 18th day of January, 1916, creating a separate department under the title, Department of Highways. Mr. W. A. McLean, Provincial Engineer of Highways for many years, with an international reputation as a good roads engineer, was made Deputy Minister of Highways.

The Inspector of Fire Equipment, Captain Wm. Crawford, has been energetic and faithful in the discharge of his duties and has made regular inspection of all government buildings. The fire equipment has been kept in good condition and ready for immediate action in cases of fire. Only one fire occurred during the year, at the Hospital for Insane, Hamilton, in Orchard House, a building accommodating 300 patients. The fire was confined to the roof of the south wing, where it originated.

Mr. E. P. Heaton, recently appointed fire marshal, has very kindly assisted the Department in the renewal of insurance risks on several buildings. He has succeeded in securing reduced rates and better conditions in the policies.

The statement of the Accountant and Law Clerk gives the capital expenditure on Public Buildings, Public Works, Colonization Roads, Good Roads (Highway Improvement), Railways, etc., and of contracts and bonds entered into in connection therewith during the twelve months ending the 31st of October, 1916.

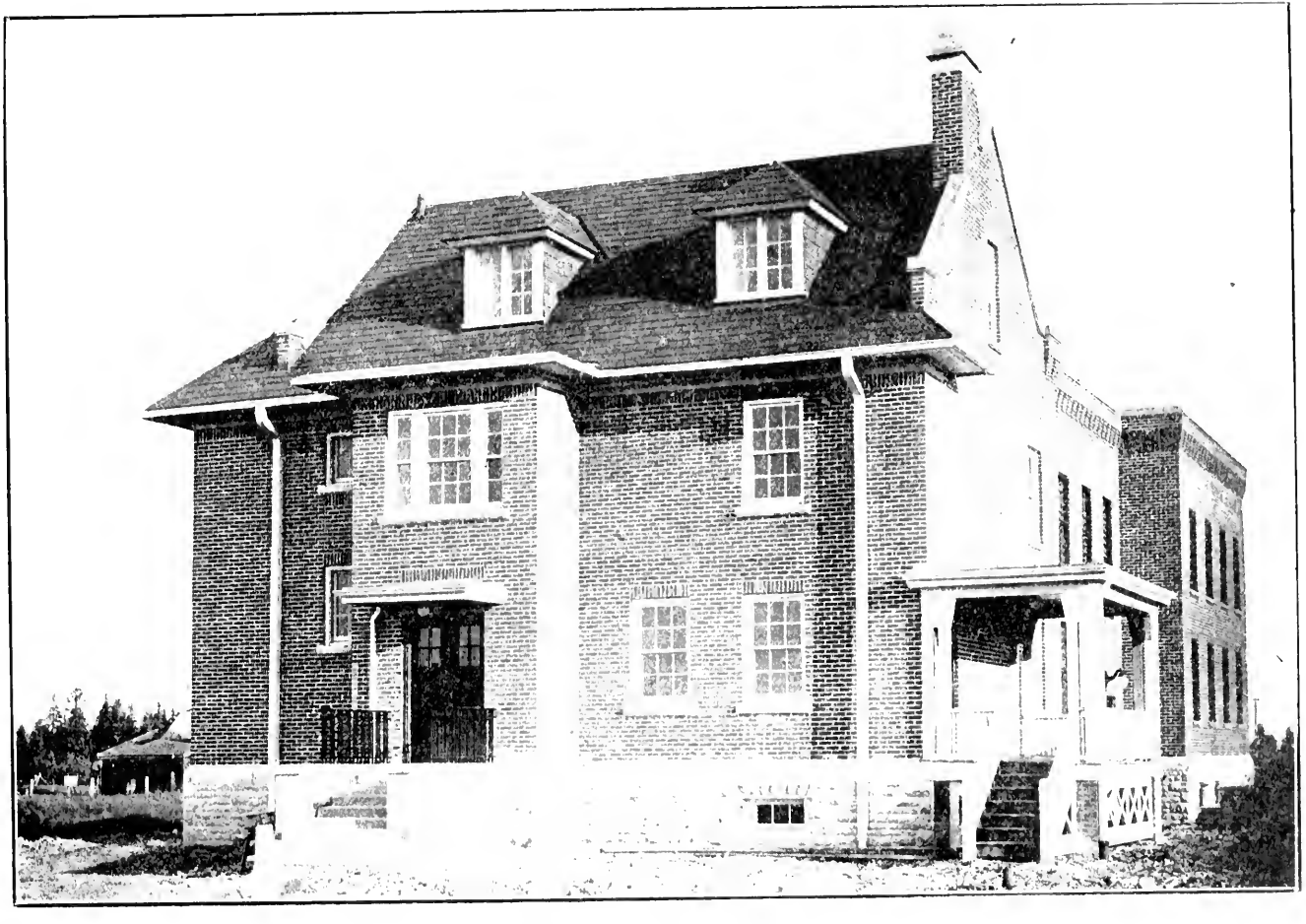
I have the honour to be,

Sir,

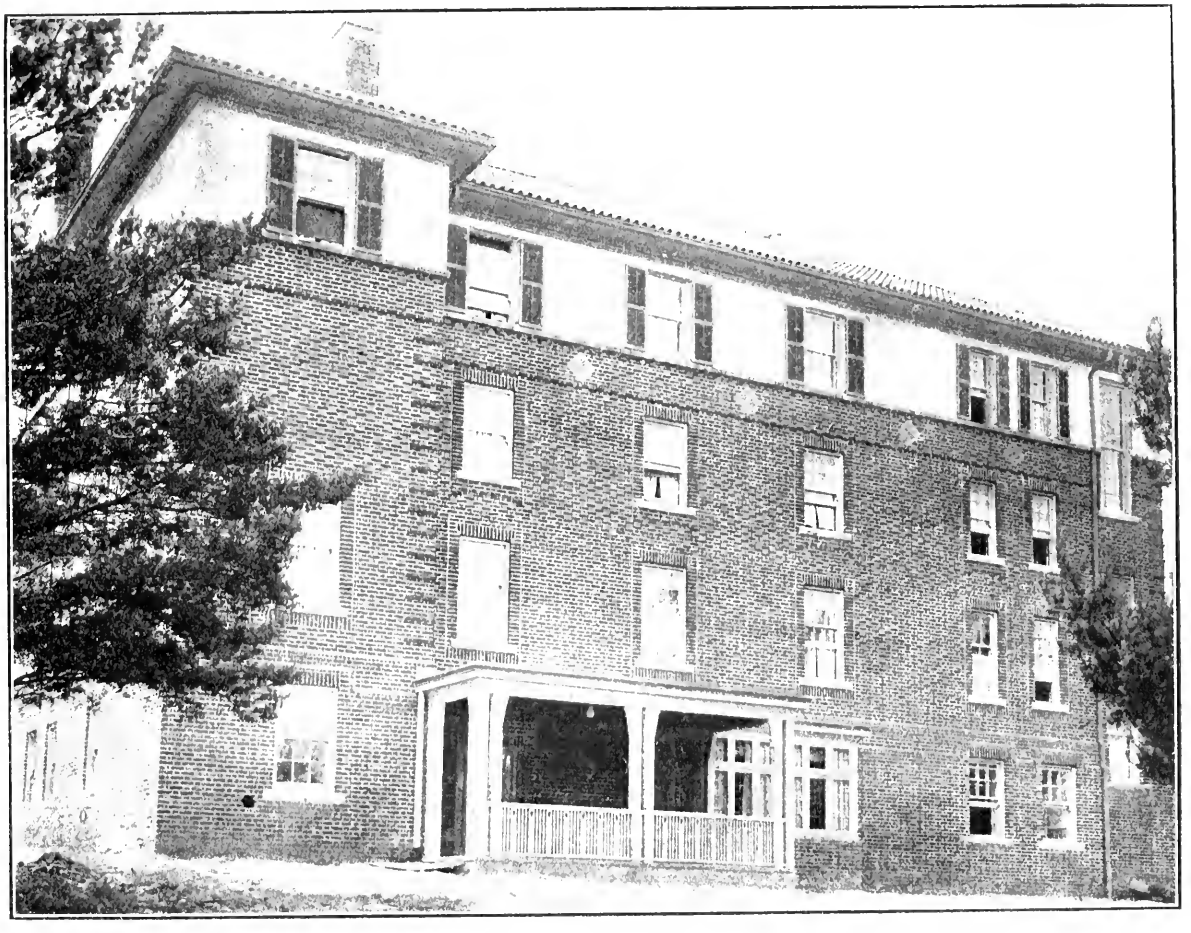
Your obedient servant,

R. P. FAIRBAIRN,

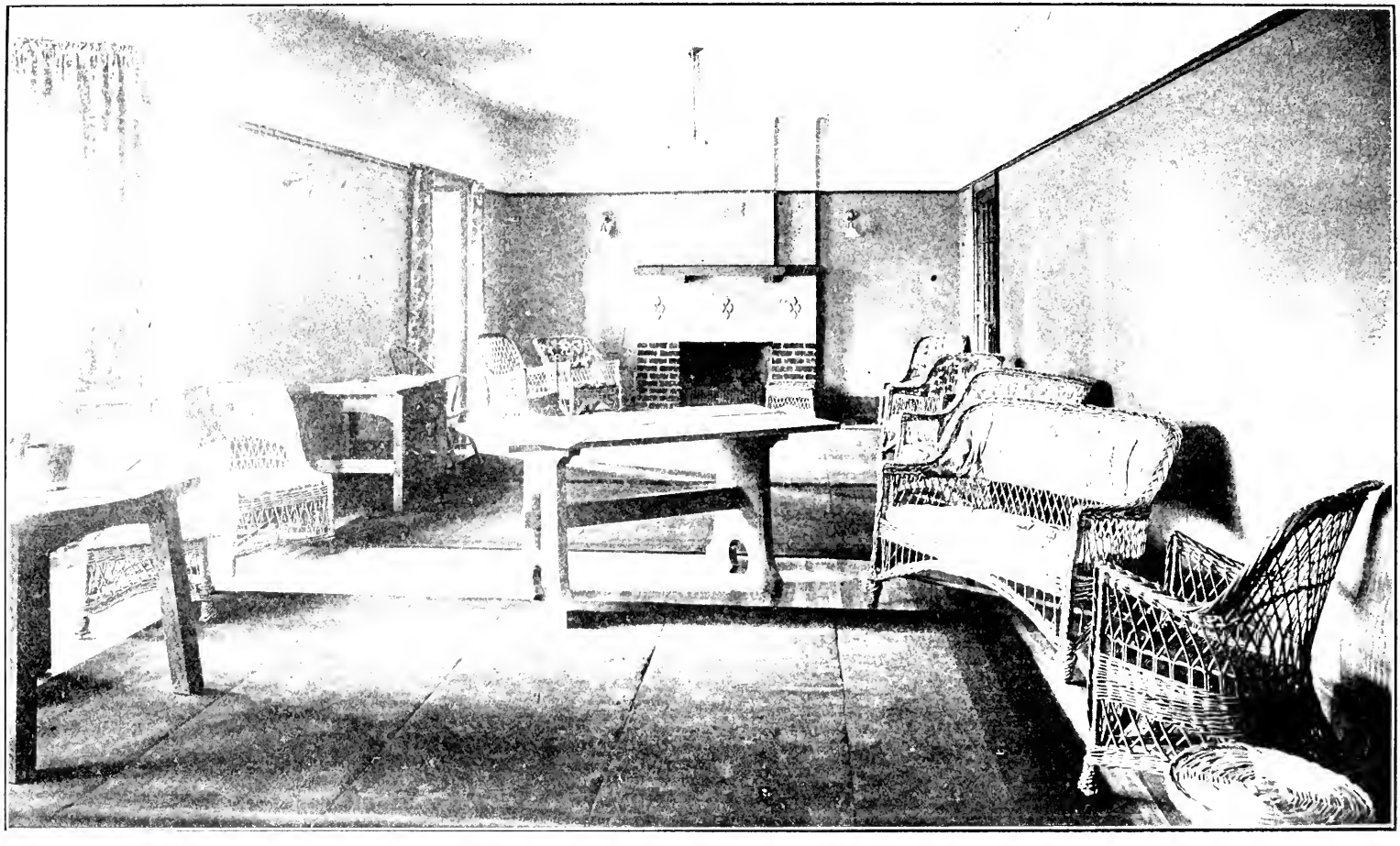
Deputy Minister of Public Works.



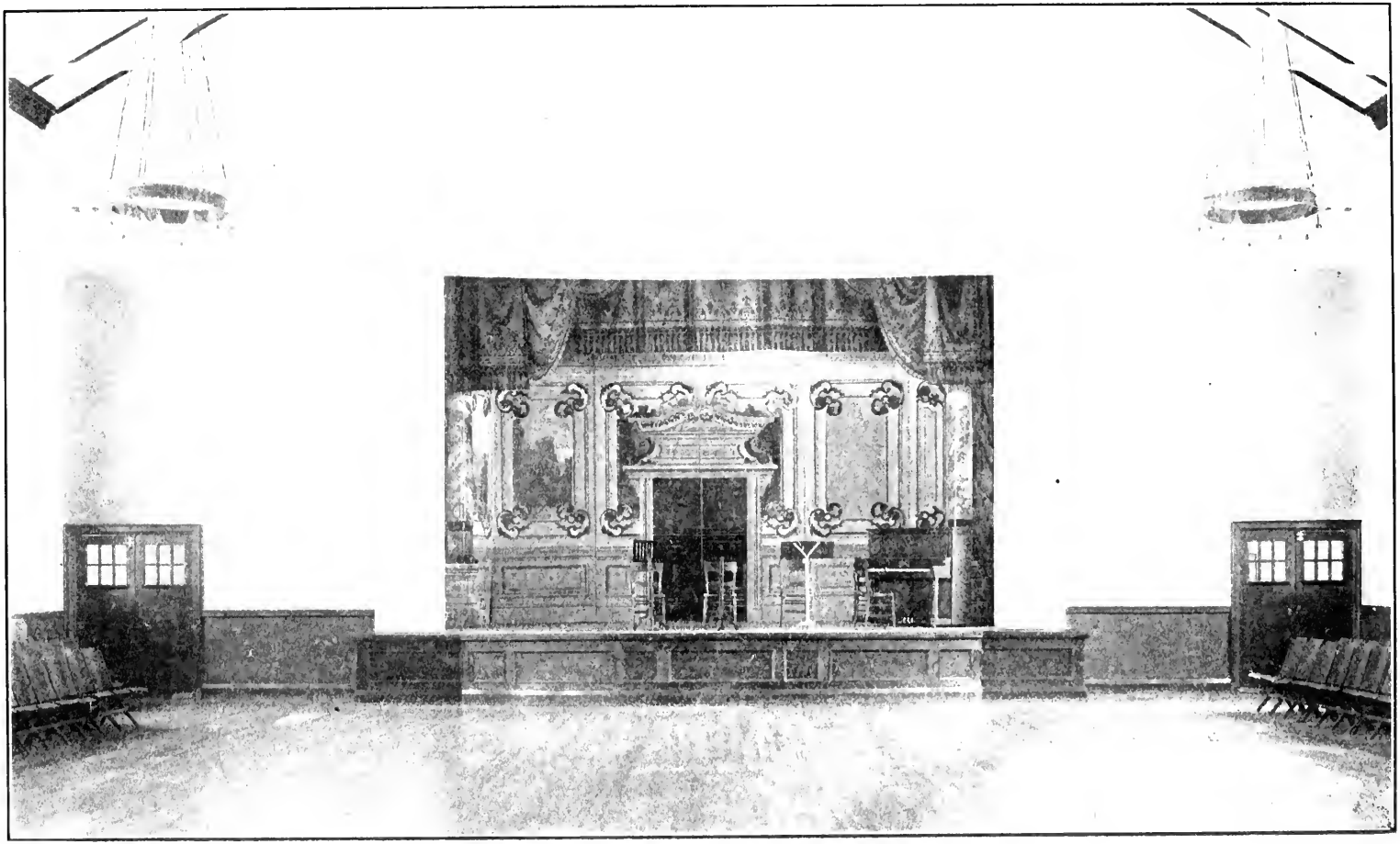
New Gaol, Sault Ste. Marie.



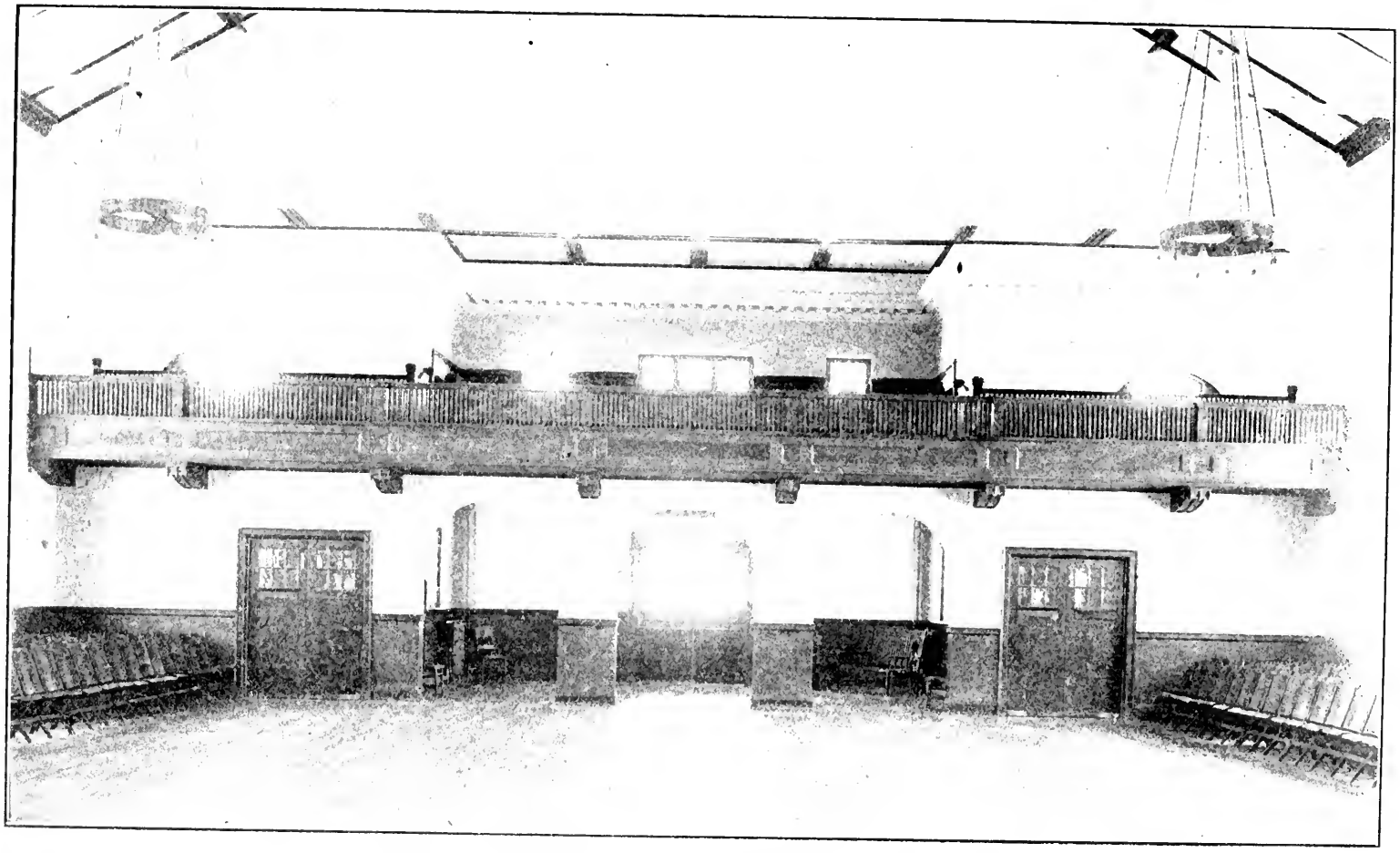
Ontario Agricultural College, Guelph. Maids' Dormitory, facing North.



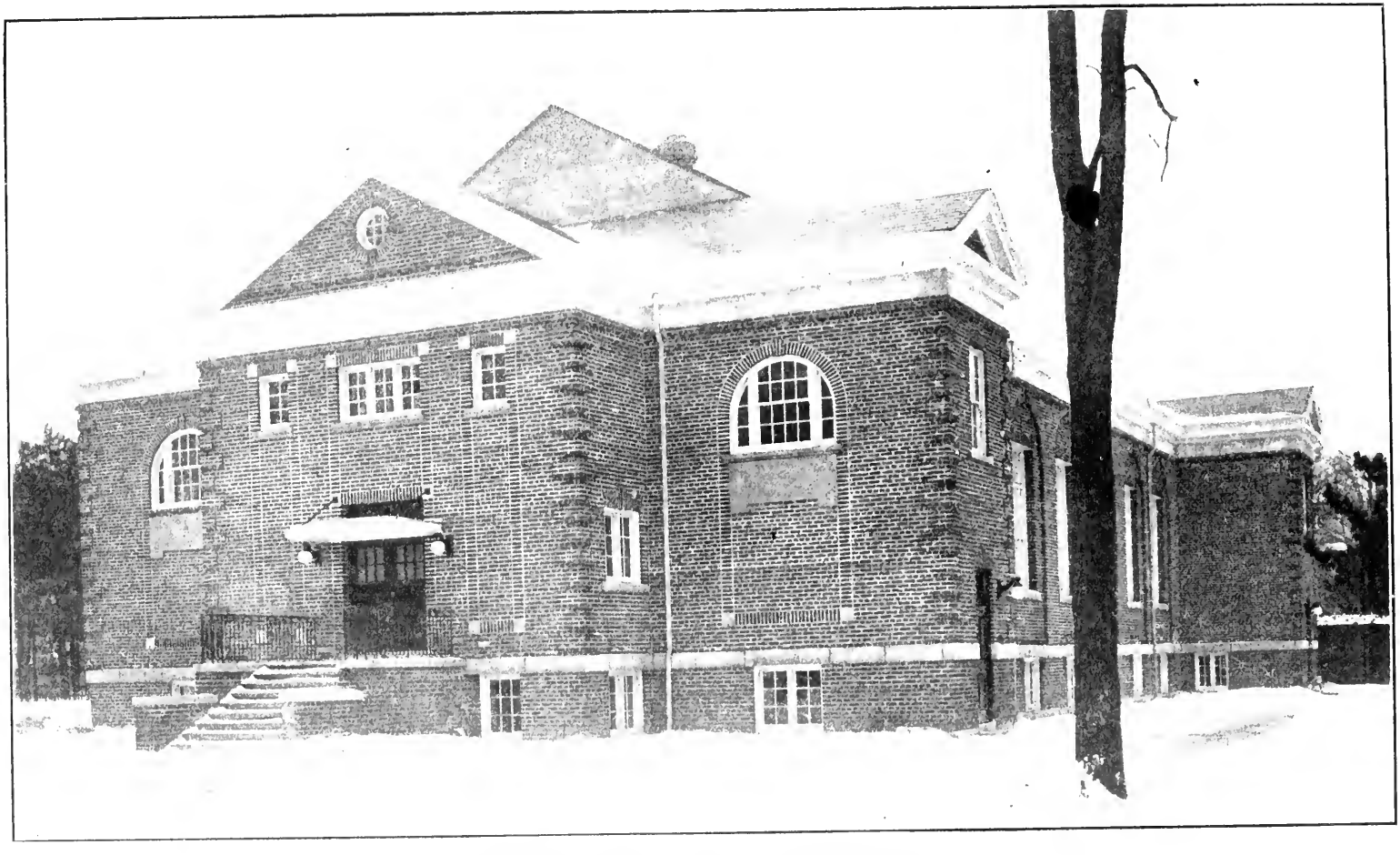
Ontario Agricultural College, Guelph. Maids' Dormitory, Sitting Room.



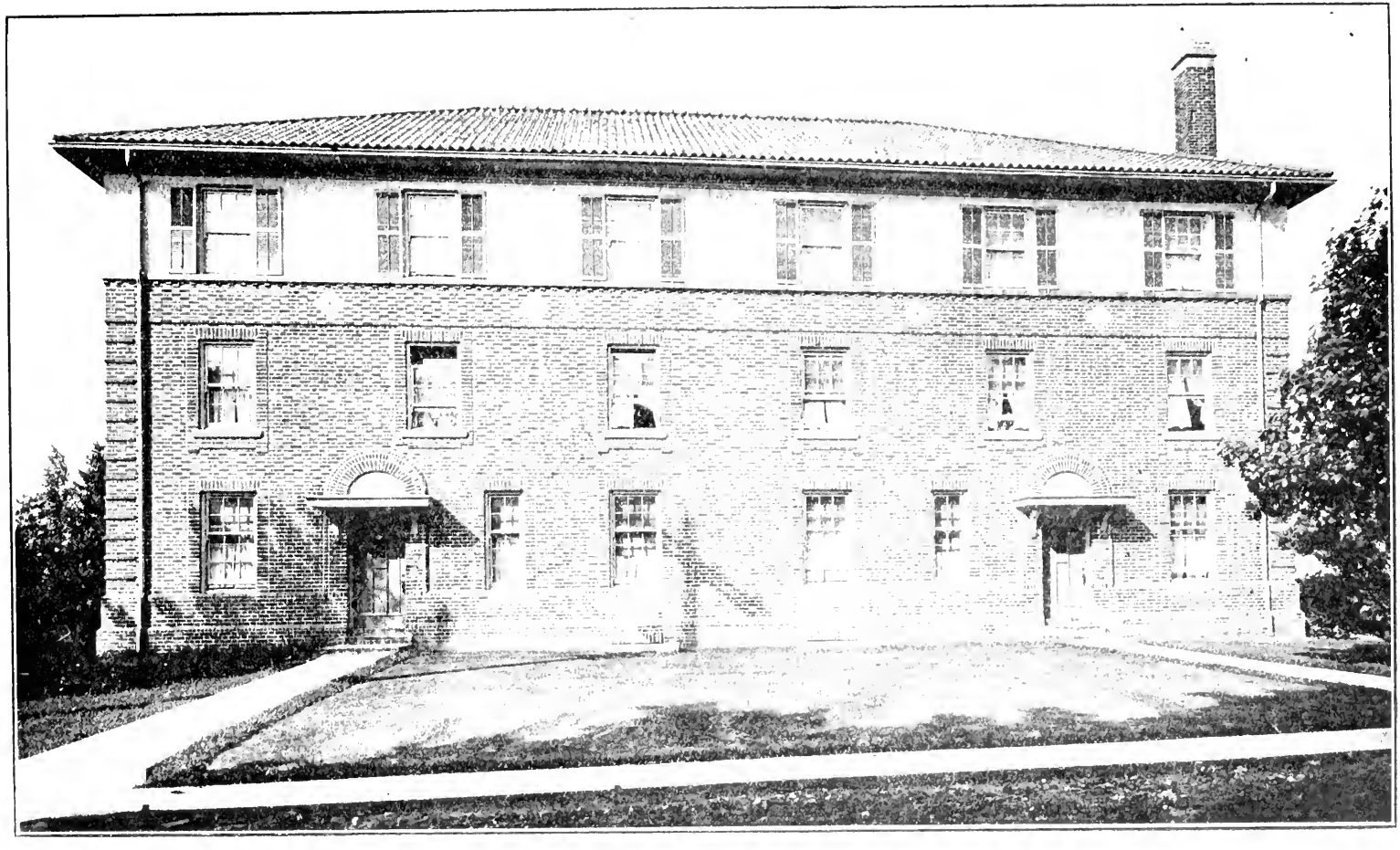
Hospital for Insane, London. Amusement Hall, looking East.



Hospital for Insane, London. Amusement Hall, looking West



Hospital for Insane, London. Amusement Hall.



Ontario Agricultural College, Guelph. Maids' Dormitory, facing South.

REPORT OF ARCHITECT.

TORONTO, October 31st, 1916.

HON. F. G. MACDIARMID, *Minister of Public Works and Highways.*

SIR,—I have the honour to submit my report for work done by the Architects' branch of the Department of Public Works for the twelve months ending October 31st, 1916.

GOVERNMENT HOUSE.

All work in connection with the residence was completed and fully furnished and was occupied by His Honour the Lieutenant-Governor on December 1st. The steward's lodge, garage and stables, with dwellings in connection therewith, were also completed and occupied on that date. The work of planting out and beautifying the grounds was commenced in the early spring and work carried on throughout the summer. A large amount of work is still to be done in connection with cleaning up the ravine. Considerable planting out was done on the lawns and terraces, and which, considering it was the first season, was very effective and reflected credit on Mr. Johnston, the gardener, under whom it was done. For the protection of the grounds a temporary wire fence with gates at entrances has been erected on the westerly boundary line and from the street line to Roxborough Drive.

PARLIAMENT AND DEPARTMENTAL BUILDINGS.

To relieve the congested condition, for lack of office space, four additional offices have been constructed in the upper floor of the centre portion of the main building, utilizing the abandoned ventilating towers on the north front to the east and west sides of the main staircase, with approaches from the west through the corridor, and from the east by fire-proofed stairways placed alongside the elevator. The work, with the exception of the stairway, was done under contract by Mr. T. V. Gearing, staircases being erected under contract by the Eberhard Wood Mfg. Co., of Toronto. These offices have been completed for some time and occupied by the Department of Education, Editor of Text Books, and the Succession Duties Branch of the Treasury Department.

As the proposed fire-proofing of the east wing has been deferred, to protect the officials and employees on the floors at the north-east end of the wing, a steel fire-escape has been erected on the west side of this wing, leading from the top floor to the court-yard, with entrances from each floor, the work being done under contract by the Page Wire Fence Co., of Walkerville.

To provide space for the automobile section of the Highways Branch, the dining-room, formerly set aside for the use of the Members of the Legislative Assembly, has been fitted up as a general office.

Repairs have been made to the building generally; the heating, lighting and ventilating plants have been kept in good condition. The usual good attention has been given to the grounds and roads surrounding the building. Repairs have been made to furnishings and new furniture supplied where found to be necessary.

Repairs have also been made to the Provincial Board of Health and Department of Mines Laboratories, No. 5 Queen's Park, including the garage. The grounds to same have also been kept in good order.

To relieve the overcrowding of the offices in the buildings your Government leased the whole of the fourth floor and half of the fifth floor of the MacLean

Publishing Co.'s building, 149 University Ave. Plans and specifications were prepared, dividing the space into twelve offices on the fourth floor and seven on the fifth floor, with suitable lavatory accommodation. Materials were purchased under tender and the work is being carried out by workmen employed by this Department under the chief carpenter, Mr. John Fryer, with the exception of the plastering, which was done under contract by Messrs. John Boyce & Son.

Osgoode Hall.

About the usual amount of repairs have been made to the buildings, which have been kept in good order, including the heating and lighting plants. No new work has been done, with the exception of the installation of a hot water heating system in the caretaker's house. Painting and decorating has been done in some of the offices and corridors, and a considerable portion remains to be done, including the new Court Room, Chancery Division and the Main Library.

Plans and specifications have been prepared for an addition to the vault on the ground floor of the centre of the main building in connection with central office, the present vault being found entirely inadequate to accommodate the increased volume of business. The new vault will be two stories in height, extending from the basement to ceiling of ground floor and takes in the space formerly occupied as an office by the Inspector of Legal Offices and lately used by the members of the Press, and the space occupied by the old vault. It will be fireproofed throughout and furnished with steel fixtures, and when completed will give the accommodation required for the next twenty-five years.

Hospitals for the Insane.

Plans and specifications were prepared by the Department for reconstructing the floors of the kitchen in the main building, Hospital for Insane, Brockville, which have been fireproofed, concreted and tiled, the latter work being done by the Provincial Secretary's Department. Considerable repairs have been made to the brickwork of the building, taking out bricks which had perished by the action of the weather. The bricks of which this building were constructed have proven most unsatisfactory and have perished wherever exposed to the action of the frost. A large amount still remains to be repaired, for which an amount will be asked in the Estimates.

Plans and specifications were made for the reconstruction of the upper floors of Orchard House, Hospital for the Insane, Hamilton, damaged by fire on April 23rd, the work being done by the Provincial Secretary's Department under the supervision of the Department of Public Works. The building is completed, with increased accommodation and many improvements.

The cottage for male patients, Hospital for Feeble-Minded, Orillia, has been fully completed, furnished and can be occupied at any time.

The other cottage for female patients is also about completed and can be occupied very shortly.

Plans and specifications were prepared by this Department for a boiler house, which has been completed and the boilers placed therein are now in operation.

The plans prepared for kitchen, bakery, storage and laundry are still under consideration. It is expected a decision will be arrived at very shortly and the work will be commenced as soon as the weather will permit.

The buildings in connection with this Institution have been carried out under the supervision of the Department of Public Works.

Plans and specifications were prepared for a kitchen and cold storage at the Hospital for Insane, Penetanguishene; the work is being carried out by the Provincial Secretary's Department.

Plans and specifications have been made by the electrician of the Department of Public Works for re-wiring and improving the lighting of a number of the Hospitals for the Insane, the old wiring being in bad condition, having outlived its lifetime, including the Hospital for Insane, Mimico, Kingston, Brockville, Penetanguishene and the Military Reception Hospital, Cobourg. The work is being done by the Provincial Secretary's Department under the supervision of the electrician of this Department.

EDUCATION.

Ontario School for Deaf, Belleville.

Repairs have been made to the various buildings in connection with the Ontario School for the Deaf, Belleville; brick piers with stone caps have been placed to the boundary fence and at entrances to grounds. An amount will be asked for in the Estimates for the erection of an iron fence, for which tenders were called for last year and were found to be too high, consequently this part of the work was deferred until next season.

New porches have been erected to the pupils' entrances on the boys' and girls' side of main building.

A concrete sidewalk has been constructed from the main building connecting with the walk from the City, the work being done under contract by Messrs. Donahue and Britton.

Preliminary drawings have been made for alterations to the main building to permit of the rearrangement of class rooms, offices, etc.; the space formerly occupied as dormitories will be divided into class rooms. New lavatory and up-to-date sanitary appliances will be installed.

It is also proposed to erect a barn and other farm buildings on the new Lewis Farm purchased by the Government.

Plans and specifications have also been prepared for a substation for housing transformers, etc., etc.

Ontario School for Blind, Brantford.

Repairs have been made to the buildings in connection with the Ontario School for the Blind, Brantford, including considerable painting to the exterior and interior of the main building. Alterations and repairs are contemplated to be made in the main building this year, including rearrangement of the Department to be used as a hospital and space for a new organ.

Plans and specifications have been prepared for rewiring in conduit and supplying new fixtures in the main building, the old wiring and fixtures having become obsolete and worn out. Additional tuning rooms have been fitted up in the space over the workshop. Plans are being made for remodelling the Industrial Shop to provide for additional vocational training, also for poultry buildings and for enlarging cow barns and the erection of a milk house.

Normal Schools.

The buildings in connection with the Normal Schools, Toronto, Ottawa, Hamilton, Peterborough, Stratford and North Bay have been kept in good repair. Additional lavatory accommodation has been fitted up in the Normal Schools at Hamilton, Stratford and Peterborough, all of the work being done under contract.

An iron fence has been erected on the north side of the lot at the Normal School, Hamilton; this work also being done under contract. Additional ventilation was put in the Art rooms in the Normal Schools at Hamilton, Stratford, and Peterborough and is working satisfactorily.

The English-French Training School, Sandwich, has also been kept in good repair.

Preliminary sketches have been prepared for an Agricultural High School to be erected at New Liskeard.

AGRICULTURAL.

Ontario Agricultural College.

The equipment of the Physics Building has been completed.

The Maids' Dormitory building was completed, fully furnished and occupied early in the year.

Plans and specifications were prepared for alterations and additions to the Chemistry Building, work was commenced about June 1st and the building is now about completed and equipment, including tablet chairs, chemistry tables, etc., etc., is being purchased as particulars are obtained from time to time. General trades is being carried out under contract by Messrs. P. H. Secord & Sons, of Brantford; the steamfitting and plumbing by A. W. Smith Co., of Guelph.

Plans and specifications were prepared for the reconstruction of the Sewage Disposal Plant; the work is being done under contract by the Mahoney Building Co., of Guelph, and is now nearing completion under the supervision of the Board of Health and this Department.

Plans and specifications were prepared and tenders called for a residence for students. Owing to the increased cost of labour and materials, it was deemed advisable to postpone the erection of the building until after the war.

Two 250 h.p. boilers have been installed in the boiler-house and connected up with the heating apparatus and are now working satisfactorily. This work was done by Mr. A. Green, Engineer of the College.

Repairs have been made to the buildings at the Fruit Station at Jordan Harbour, as required, the work being done under the supervision of the Superintendent.

Rondeau Park.

Repairs have also been made to the buildings on Rondeau Park, as required from time to time.

Experimental Farm, Monteith.

Plans and specifications were prepared for a barn 140 ft. x 38 ft.; all material for construction of steel and for metal roofing were purchased by tender. The work is under way; the basement will be erected and covered in and used for the winter. Tenders will be called for the superstructure so that work can be commenced early in the season.

DISTRICTS.

The new gaol at Sault Ste. Marie has been completed and occupied for some time. A cement walk has been laid on McNab Street from Gladstone Street to the roadway, across and in front of the gaol property, the Government paying a proportionate cost of same. Cement walks have also been laid from the street to the

entrances of the gaol. Considerable work should be done in cleaning up grounds next year.

Plans and specifications were prepared for the new Court House at Sault Ste. Marie and tenders called for. On account of the tenders being so much in excess of the estimated cost of the building it was decided to defer the erection of this building in the meantime.

The Registry and Land Titles office in Fort William has been completed and furnished with the exception of the vaults, the furnishing of which has been deferred until the appointment of the registrar.

Plans and specifications were made for a greenhouse to be built on the Prison Farm at Fort William; the work is being carried out by the Provincial Secretary's Department.

A new heating apparatus has been installed in the gaol at South Porcupine.

Inspection.

Inspections have been made by officials of the Department from time to time of the various buildings throughout the Province under this Department, including Hospitals for Insane, Normal Schools, Court Houses, Gaols, Registry and Land Titles Offices.

All of which is respectfully submitted.

F. R. Heakes,
Architect.

REPORT OF ENGINEER.

Hon. F. G. Macdiarmid, *Minister of Public Works and Highways, Ontario.*

Sir,—I have the honour to submit the following report on the works carried out under the Engineer's Branch of your Department during the fiscal year ending October 31st, 1916.

The practice in vogue for a number of years of construction by day labour was followed during the year. Plans for all works were prepared in this office, material was purchased by tender and all work performed by day labour under our regular staff of foremen.

All works in progress at the end of the previous fiscal year were continued during favourable weather.

Owing to the enormous advance in the price of structural steel the construction of a number of steel span bridges was deferred to a more favourable season. The advance in the price of steel over 1914 prices is about 120 per cent.

During the season the following bridges were constructed:

3 of steel on timber piers.
1 of steel on concrete piers.
22 concrete beam spans.
3 concrete trestles.
50 timber bridges.

Grants were made to three bridges constructed by the local authorities. The most important of the bridges constructed were the Stanley bridge in the Thunder Bay District, comprising five steel spans; the Cross Lake bridge in Addington, comprising two 80-foot spans, and a very expensive rock-fill, and the Combermere bridge in Renfrew, comprising two steel spans and a swing span to provide for navigation between Barry's Bay and Palmer's Rapids.

Another work of importance consisted in the renewal of the timber in the Norman Dam. The owners of the dam provided the permanent portion of the structure comprising the rock-fill, dam, stone piers, etc. The Government agreed to provide the stop-logs and timber deck, to operate the dam in the public interest and to keep the timber portion of the structure in proper repair. During the past season the greater part of the stop-logs were renewed and a new deck built over the full length of the dam. It is now in a splendid state of repair.

The dredge continued work in the Muskoka Lakes. In the early season a channel was cut under the Beaumaris bridge to provide a safe passage for large launches from Milford Bay to the Bracebridge River. The work on Indian River near Port Carling was continued. This work consists of cutting off points and widening the channel. In the fall the dredge moved to the Joseph River Narrows, and was working there at the close of the season.

The vote of $30,000 for maintenance was expended as usual in operating the dredge and in the repair of various public works. An unusual demand was made on this fund in making good the damage caused on the Vermilion River through the breaking of the dam at the outlet of Onaping Lake. Three large bridges were badly damaged and one bridge was entirely destroyed. The cost of renewal of these bridges was $2,500.

The expenditure of the Maintenance Fund was as follows:

GENERAL.

Tools, repairs to equipment, etc.	$1,794 97	
Storehouse, freight, cartage, etc.	65 05	
Superintendent's office, travelling expenses, disbursements, rent, etc.	1,316 17	
		$3,176 19

NAVIGATION.

Dredge, operation, repairs, etc.	$6,373 65	
Clearing channels, etc.	141 25	
		$6,514 90
Magnetawan Lock, Dock, Piers, etc.	$1,076 03	
Huntsville Lock and Dam	365 04	
Port Carling Lock	262 18	
Port Carling Dam—material	1,556 59	
Ahmic Lake Dam—repairs	89 64	
Bala Dam	46 35	
Dollar Lake Dam	141 20	
Opickinimica Dams	166 42	
Dryden Dam	265 57	
Norman Dam—new deck and operation	1,389 01	
		$5,358 03
Swing bridge, Ryerson	$200 69	
Swing bridge, Huntsville	3 22	
Swing bridge, Magnetawan	273 79	
Swing bridge, Port Sandfield	135 50	
Swing bridge, Keewatin	32 35	
		$645 55

BRIDGES.

Algoma:		
Ansonia bridge—fill	$71 80	
Boda Creek bridge	16 20	
Bungay bridge, Victoria	87 27	
Victoria bridges	146 49	
Mississauga bridge—floor	86 26	
Marsh River bridges	360 13	
Thessalon bridge—reflooring	385 27	
Miller's bridge, Lefroy	112 15	
Wilkes bridge, Lefroy	61 00	
North Road Culvert, Plummer	353 24	
Shedden burnt bridges	163 80	
Shewfeldt bridge—grading	46 47	
Two Tree bridge—floor	9 90	
		$2,099 98
Soo District:		
Goulais bridge, Fenwick—repairs	$22 80	
		$22 80
Kenora:		
Leeland bridges	$51 48	
Keewatin Town bridge	1,392 24	
		$1,443 72
Rainy River:		
McKelvie bridge—grade	$24 00	
Grassy River bridge—floor	35 00	
		$59 00
Manitoulin:		
Espanola bridge—repairs	$521 14	
		$521 14

Sudbury District:		
Blezard Valley bridge—repairs	$168 90	
Onaping bridge—repairs	97 00	
Vermillion bridge, Morgan—renewal	1,396 06	
Poulin bridge	109 50	
Vermillion bridge, Whitefish	1,161 70	
Veuve River bridge, Hagar	259 05	
Fairbank Creek bridge	58 00	
		$3,250 21
Sturgeon Falls District:		
Ebert bridge, Gibbons	$221 00	
Ebert bridge, Badgerow	267 10	
Maskinonge Creek bridge, Casimir	110 50	
Queenville bridge, Field	169 00	
		$767 60
Temiskaming District:		
Elk Lake bridge	$59 68	
Henwood bridge, Con. V.	54 00	
White River bridges—protecting	326 82	
Purchase of material	212 56	
		$653 06
Nipissing District:		
Cameron bridge	$357 07	
Papineau bridge	40 00	
		$397 07
Parry Sound District:		
Beaver Lake bridge—renewal	$1,092 24	
Commanda Creek bridge	20 25	
Thiels bridge	531 51	
High bridge, Loring road	216 76	
Golden Valley bridge	25 49	
Seguin bridge, Christie	14 50	
		$1,900 75
Muskoka:		
Little Kashee bridge—grading	$287 44	
		$287 44
Victoria and Haliburton:		
Furnace Falls bridge	$6 85	
Hollow Lake bridge—renewal	428 28	
		$435 13
Hastings:		
Papineau Creek bridge	$52 87	
		$52 87
Addington:		
Fall River bridge	$221 59	
Clear Lake bridge, Arden	133 75	
Cross Lake bridge	1,718 30	
		$2,073 64
Renfrew:		
Dacre bridge	$51 14	
Latchford bridge	38 06	
Griffith bridge	39 45	
Bell's Rapids bridge	101 60	
		$231 25

The drainage of roads in the unorganized districts was continued, about $18,400 being expended on this class of work. Scarcity of labour prevented the full expenditure of the money voted for this class of work.

Two drainage schemes for which aid was voted under "The Provincial Aid to Drainage Act" were examined and reported on.

Lockmaster's Returns.

The following are the Lockmaster's returns of lockages during the year 1916:

Port Carling Lock.—3,809 steamers, 309 small boats, 515 scows, 13 rafts of timber.

Magnetawan Lock.—730 steamers, 285 small boats, 428 scows, 178 rafts of timber.

Huntsville Lock.—283 steamers, 515 small boats, 57 scows, 75 rafts of timber.

WORKS CONSTRUCTED UNDER SPECIAL APPROPRIATIONS.

Rainy River District Bridges.

Berglund Road Bridges.—This work consists of two timber bridges across the south branch of the Grassy River in the 6th Concession of Pratt, on the Sleeman-Grassy River Road. Both bridges are of pile trestle construction. The south bridge is 30 feet long, with two spans of 15 feet. The north bridge is 45 feet long with three spans of 15 feet. In each case the deck, caps, stringers and floor consists of hewn tamarac. The approaches are well graded. The total cost of both bridges was $188.89.

Euston Bridge, Sturgeon Creek, Dobie.—Located over Sturgeon Creek at Lot 10, on the 5th Line of Dobie. The bridge is of timber, is 62 feet long, consisting of a centre truss span 32 feet long, with two approach spans 15 feet long, supported on pile bents, double bents at each end being used to support the truss. The timber used throughout is tamarac, and is coated with tar. The floor is of 3-inch tamarac plank. Total cost of bridge $615.39.

Pine River Bridges, Patullo-Nelles Townline.—Located over Pine River on the townline west of Section 18, Patullo. The south bridge is 130 feet long and 18 feet high. It consists of a centre truss span 40 feet long, with three approach spans 15 feet long at each end. The truss span is supported on double pile bents and the balance on pile bents driven at 15-foot centres, 4 piles to a bent. The truss timbers are of red pine, and the balance of the timber is tamarac. Three-inch tamarac plank is used for flooring.

The north bridge is 110 feet long and has a centre truss span 36 feet long, otherwise the structure corresponds with the above description. Both bridges are coated with tar. The approaches to both bridges were in very bad condition and the work of putting them in a serviceable condition entailed a heavy expenditure. The total cost of the two bridges was $2,732.79, being at the rate of $11.34 per lineal foot.

Sturgeon Bridge, Mather.—Located over the east branch of Sturgeon Creek, on the road between Lots 2 and 3, Concession 1, Mather. The bridge is 40 feet long and 6 feet high. It is of pile trestle construction; stringers are 8-inch flatted tamarac, and the cover is of 6-inch flatted tamarac. A second bridge is located over the east branch of Pine River on the road between Lots 8 and 9, in the 6th Concession of Mather. It is 45 feet long and 5 feet high, of pile trestle con-

struction; caps and stringers flatted tamarac, and flooring of 3-inch tamarac plank, The cost of both these bridges, $520.91.

The bridges in the Rainy River District were all constructed under the direction of Frank Clement, Road Inspector for this District.

Kenora District Bridges.

Gull River Bridge, Dryden-Richan Road.—Located over the Gull River on the road between Dryden on the Canadian Pacific Railway and Richan, a station on the National Transcontinental Railway. The bridge is a pile structure 132 feet long with a 14-foot roadway. The floor is 8 feet above water level. The two centre spans are 20 feet long, the other spans are 16 feet. The caps are 10 x 12 and stringers 6 x 12. The stringers on the 20-foot spans are 8 x 12. The piles, of which 4 are used in each bent, are extra heavy and are well braced and bolted to resist the ice pressure. Part of the timber was taken from the bush near the site. The total cost of the bridge was $700.00.

Long Lake Bridge, Redvers.—Located over the narrows between Long Lake and Square Lake, near Lot 12 in Redvers Township, about 5 miles north of Quibell station. The bridge is a pile structure 350 feet long with a roadway 15 feet in width. The pile bents are driven at 18-foot centres, 4 heavy piles to each bent. The caps and stringers are of Jack and Norway pine, flatted. The floor is of flatted Norway pine 4 inches thick. A substantial guard rail is placed on each side of the bridge. All brush and timber in the vicinity of the bridge has been cleared away for fire protection. This is the first bridge to be built by this Department north of the Transcontinental Railway. The total cost of the bridge was $655.00.

Eton Township Bridges.—No. 1, located over a creek on the Trunk Road on Lot No. 6, Concession 1, Eton, about one mile west of Oxdrift. The bridge is 85 feet long. The piers and abutments were levelled up and a new deck of tamarac constructed. The approaches were properly graded.

Three other bridges on the road north from Oxdrift, 16 to 22 feet long, were recovered. Two hundred dollars was expended on this work. The work in this district was all done under the direction of James Fraser, Road Inspector for the district.

Thunder Bay District Bridges.

Gillies Township Bridges.—No. 1 is on the middle sideline in Concession 4; No. 2 is at Lot 4 on the 5th Concession Road; No. 3 is at Lot 4 on the 2nd Concession Road. These bridges are 12 feet long and 14 feet in clear width. The abutments consist of cedar piles, 4 to each bent, capped with 8-inch x 10-inch tamarac; seven lines of 3-inch x 12-inch stringers support a floor of 3-inch tamarac plank. Extensive approaches are built up to each bridge. The total cost of these bridges was $635.43.

Mattawin Creek (Shabaqua) Bridge.—This bridge is located over the Shebandowan River on the line of the Dawson trail, at Lot No. 80, Dawson Road Range. The structure is 115 feet long and 14 feet in clear width. It has a centre truss span 50 feet long with trestle approaches 17 feet long on east end and 48

feet long on west end. The truss is supported on double pile piers, 4 piles in each bent. On the east end is a pile approach span 16 feet long, and on the west end are three approach spans of 16 feet each. The truss timbers are all 10 inches x 12 inches, caps 10 inches x 12 inches, and floor stringers 3 inches x 12 inches, seven lines of stringers being used. Flooring, 3-inch tamarac plank. The pile bents are cross braced with 3-inch x 8-inch braces bolted to piles. The structure is painted. The total cost of the bridge was $595.82. The timber was procured from Crown Lands.

Slate Bridge, Blake-Paipoonge Townline.—Located over the Slate River at north-west quarter of Lot 9 of Blake on the Townline road. The bridge is 61 feet long with roadway 14 feet wide. It has a centre King truss span 30 feet long with a 15-foot approach span on each end. The truss timbers and caps are 10-inch x 10-inch tamarac. The substructure is of piles, five piles being used in each bent: seven lines of 3-inch x 12-inch stringers carry a 3-inch plank floor. The structure is painted with tar roofing paint. The approaches are well graded. Total cost of bridge, $549.37.

Slate Bridge—Scobie-Pearson Townline.—Located over Slate River at Lot 7 on the Scobie-Pearson Townline. The structure is a pile trestle 48 feet long, consisting of three 16-foot spans. The pile bents have 5 piles to each bent and are capped with 10-inch x 10-inch timbers. Six lines of 8-inch flatted stringers support a 3-inch plank floor. A substantial guard rail is supplied. The necessary grading has been done at the approaches. The full cost of the bridge was $376.51.

Stanley Bridge. This bridge is located over the Kaministiquia River at Lot 31, in 1st Concession of Paipoonge. An island in the middle of the river divides it into two channels, the north and the south. Formerly each channel was crossed with timber truss spans on timber piers. The timber structure over the south channel was gone beyond repair—worn and rotted out. It has been replaced by a new structure. The old timber piers were removed to low water line where the bottom timbers are in first-class repair. These piers were all built of square timber to a height of 6 feet or one foot above high water level. Three lines of 12-inch x 12-inch timbers on top of the piers support the steel grillage which forms the bridge seats. The bottom chords of steel spans are 9 feet above the summer level of the river. The end piers are of double pile bents, 6 piles to each bent driven at 5-foot centres. The superstructure comprises five steel spans 60 feet long, centre to centre of bearings, with a roadway 14 feet in clear width. The bridge seats on which the truss shoe plates rest consist of two 12-inch I-beams 6 feet long. These I-beams are bolted to the crib or pier timbers.

Crossing the island between the two bridges there is a space of 110 feet. This space has been graded up to the floor level, requiring about 1,000 cubic yards, the fill being from 6 to 12 feet high. At the south end of the bridge about 300 yards of fill was required, the fill running from 2 to 12 feet high. Guard rails are in place on each fill.

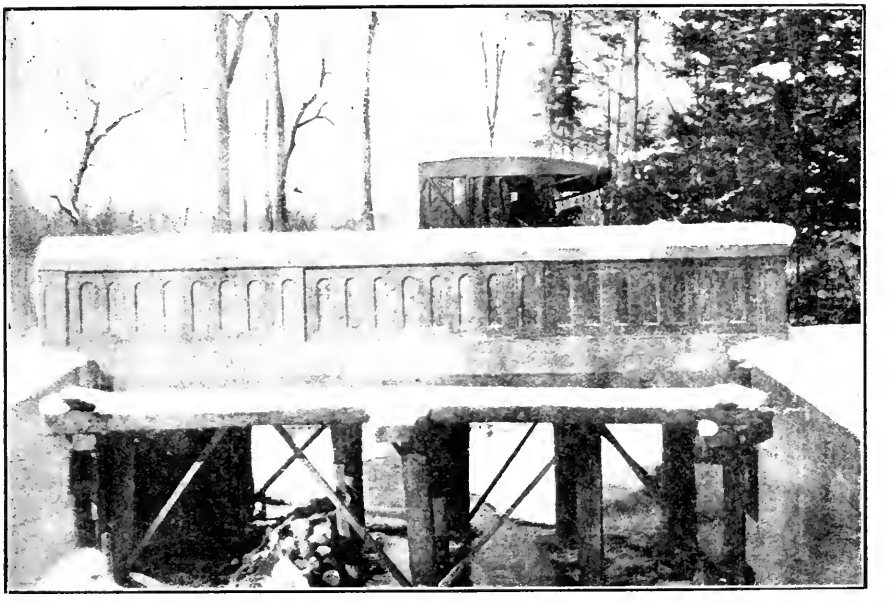
The old bridge over the north channel has been overhauled and gives promise of four or five years' further service. The total cost of this work was $7,347.00.

The work in the Thunder Bay District was all done under the direction of John McNee, Road Inspector for the District.

SAULT STE. MARIE DISTRICT BRIDGES.

Coldwater Creek Bridge.—Located on the 4th line of Tarentorus at the south-east corner of Section 16. It is a concrete box culvert, 20 feet long, 4 feet wide and 6 feet high inside measurement. The side walls are from 18 to 24 inches thick, and the top and bottom are 12 inches thick. The top is reinforced with twisted steel bars. The grading has not been completed.

Cooper's Bridge, Big Carp.—Located over the Big Carp Creek on the Townline between the Townships of Prince and Parke. The structure comprises a concrete beam deck on concrete abutments. The abutments and wing walls are 13 feet in height, 5½ feet wide at the bottom and 2½ feet wide at the base of the deck. The



Cooper's Bridge, Soo District. 20-foot Concrete Bridge over Carp River

abutments rest on pile foundations. The deck consists of a 6-inch concrete floor supported on 4 concrete beams. The beams are 12 inches deep below floor level. The outside beams have a full depth of 24 inches. Each beam is reinforced with five 1-inch square twisted steel bars. These are fastened to the floor bars with stirrups of No. 7 wire. The floor is reinforced with nine ½-inch bars parallel with the beams and transverse bars of ⅝-inch twisted steel set at 8-inch centres. The railing consists of a panelled concrete slab with four posts on each side reinforced with ½-inch bars. The approaches to the bridge were properly graded. The full cost of this bridge was $890.90. The bridge provides a waterway 20 feet in clear width.

Dean's Creek Bridge, Korah.—Located over a creek on the road south of Section 26, Korah. It is a concrete beam bridge 20 feet long and 14 feet wide of the same plan as Cooper's bridge. The abutments are 11 feet high, but are not provided with pile foundations.

Money Bridge, Goulais Bay Road.—Located over a creek on the road west of Section 7, Tarentorus. It is a concrete beam structure on the same plan as Cooper's bridge as described above. The bridge has a 20-foot waterway with a roadway 14 feet in clear width. The abutments are 9 feet high and are supported on pile foundations.

Rogerson's Bridge, Little Carp.—Located over the Little Carp Creek on the Townline between Prince and Parke. The structure is a concrete beam bridge on the same plan as Cooper's bridge above described. It has a 20-foot waterway with a roadway 14 feet in clear width. The abutments are on pile foundations and are 9 feet high. The approaches are properly graded.

Van Louvin Bridge, Big Carp.—Located over the Big Carp Creek on the road on the west of Section 36 in Prince, near the south-west corner of Section 36. The structure is of concrete beam construction on the same plan as Cooper's bridge above described. The bridge provides a 20-foot waterway and a roadway 14 feet in clear width. The abutments, which rest on a pile foundation, are 10 feet high. The creek strikes the road at an angle at the old location and caused considerable trouble. The new bridge was moved north from the old site and the creek channel diverted to cross the road at right-angles. The old site was filled in. The cost of the bridge, including creek diversion and filling in the old site, was $1,136.00.

Wall's Bridge.—Located over a branch of Carp Creek on the road south of Section 25 in Prince. It is a concrete beam bridge on the same plan as Cooper's bridge above described. It has a waterway 20 feet in clear width, and a roadway 14 feet in clear width. The abutments rest on timber grillages and are 10 feet in height to the bridge floor. The approaches are properly graded. The full cost of the bridge was $791.90.

All the bridges in the Sault Ste. Marie district were constructed under the direction of S. W. Butt, a foreman of this Department.

Algoma District Bridges.

Shewfeldt Creek Bridge.—Located over Shewfeldt Creek at Lot No. 8, on the road between Concessions 5 and 6, Tarbutt Additional. It is a concrete beam structure with a 20-foot waterway, and a roadway 14 feet in clear width. The abutments and wing walls are 14 feet high on a solid natural foundation. Four beams 12 inches wide and 12 inches deep, reinforced with five 1-inch square twisted steel bars support a floor reinforced with ½-inch and ⅝-inch twisted bars. The railing is a panelled slab with four posts reinforced with ½-inch bars. The approaches are well graded. This bridge was built under the direction of A. L. McDonald, Public Works foreman, at a total cost of $1,492.00. The gravel for concrete was supplied free of cost by the township.

Two Tree Bridge, 5th and 6th Sideline, St. Joseph Island.—A timber bridge with double pile abutments. It has a 26-foot span with a King truss. The truss timbers are 10 inches x 10 inches. The cover and stringers are of flatted cedar. The approaches are well built up of stone and clay. Total cost $398.00.

Tullock's Bridge, Gladstone.—This is a concrete culvert, 30 feet long, 4 feet wide and 4 feet high, inside measure. The bottom slab is 8 feet wide and 13

inches thick. The top slab is 12 inches thick and is reinforced with ½-inch transverse bars set in 12-inch centres. The side walls resting on the bottom slab are 18 inches thick at the bottom and 12 inches thick at the top. The wing walls at each corner are 5 feet long and are reinforced with ¾-inch bars at junction with side walls. The old channel is filled, the fill being 80 feet long and 11 feet high, that is, 6 feet above top of culvert. The sides of the fill are rip-rapped. A guard rail on each side of the fill. This work is a permanent job, in first-class condition. The total cost of the work was $592.15.

Sudbury District Bridges.

Dennison Bridges, Trunk Road.—This work consists of three bridges: No. 1, over a creek on Lot 11, Concession 1; No. 2, over Fairbank's Creek on Lot 5, Concession 2; No. 3, over Fairbank's Creek on Lot 2, Concession 2. All in the Township of Dennison. The bridges are all built on the same plan. They are concrete beam spans with a 20-foot waterway, and roadway 14 feet in clear width. The railing consists of a panelled concrete slab, strengthened with four reinforced posts on each side. A 6-inch reinforced floor slab is supported by four 12-inch x 12-inch beams, reinforced with five 1-inch square twisted bars. The abutments are of concrete. The abutments for the bridge on Lot 11 rest on a timber grillage. The other bridges rest on a natural foundation. These bridges were built under the direction of S. W. Butt, Public Works foreman. The total cost of the three bridges was $3,977.85.

Manitoulin District Bridges.

Tyson Creek Bridge.—Located in unsurveyed territory about two miles east of Killarney. It is a timber structure on cedar cribs. A waterway is provided for with a 20-foot span, one 18-foot span and two 13-foot spans. The crib timbers are well drift-bolted, but the cribs are not yet filled with stone. $200.00 was expended on the bridge.

McColman Creek Bridge.—Located at Lot 7, on road between Concessions 10 and 11, Campbell Township. The deck of the bridge, covering and railing was renewed and the approaches stone-filled and covered with clay. $81.00 was expended on the work.

Hartley Creek Bridge.—Located at line of Lots 7 and 8, on road between Concessions 6 and 7, Campbell. The bridge is 18 feet long—rebuilt with stone abutments and cedar cover. $75.00 was expended on this bridge.

20th Sideroad Bridge, Concession 10, Campbell.—Rebuilt at a cost of $200.00. Cedar timber was secured from the log-filled approaches, which were removed. The approaches were filled with 250 yards of rock and 180 yards of clay. The fill was then top dressed with 50 yards of gravel.

Brittainville Creek Bridge.—Located at Lot 22, Concession 10, Campbell. The bridge is 16 feet long. A new deck, stringers and cover was put on and approaches properly filled with clay and stone, and dressed with gravel. $131.00 was expended on the work.

Galbraith Creek Bridge, Campbell-Carnarvon Townline.—Concrete abutments 4½ feet high with wing walls 5 feet long, cedar stringers, 3-inch plank floor, guard rail in place. Seventy-five yards of stone and 175 yards of gravel were used in building up the approaches.

Lockyear Creek Bridge, Lot 4, *Concession* 4, *Sheguiandah.*—Bridge 14 feet long, stone abutments, cedar stringers, cover 4-inch cedar plank, guard rail in place, approaches graded. Cost $125.00.

Kagawong Creek Bridge, Lot 28, *Concession* 16, *Billings.*—Concrete abutments 7 feet high; bridge is 30 feet long; is supplied with a King truss. Cedar plank cover. Roadway 14 feet in clear width. Cost $200.00.

First Concession Bridge, Lot 7, *Howland.*—Stone abutments, flatted timber cover, 14-foot span, approaches graded and rip-rapped Cost $204.30.

Spanish Bridge, Graces and Bigwood Headquarters, Lot 4, *Concession* 5, *Nairn.*—A new abutment at north end of bridge 23 feet long, 12 feet wide and 18 feet high, built of cedar timber, rock-filled and surfaced with clay and gravel. $200.00 was expended on the work.

Stevens' Creek Bridge, Bidwell-Billings Townline.—Located in 2nd Concession of Billings stone abutments, timber cover, span 10 feet. Approaches well graded. Cost $120.00.

Barrie Island Bridge, Lot 17, *Concession* 4.—Reconstructed in timber, length 11 feet. Cost, including heavy grading, $200.00.

Sturgeon Falls District Bridges.

Deer Creek Bridge, 3rd Line, Ratter.—Located over Deer Creek at Lot 1, on the road between Concessions 2 and 3, of Ratter. It is a timber bridge 26 feet long, 14-foot roadway, with pile abutments. The bridge was constructed by S. W. Butt, Public Works foreman. Total cost, including grading, $500.00.

Pike Creek Bridge, Bastedo.—Located over Pike Creek at south half of Lot 9, Concession 1, Bastedo. A timber bridge 55 feet long. Cedar piers, flatted cedar cover. The bridge was built by D. H. McIntosh, Public Works foreman, at a cost of $331.00.

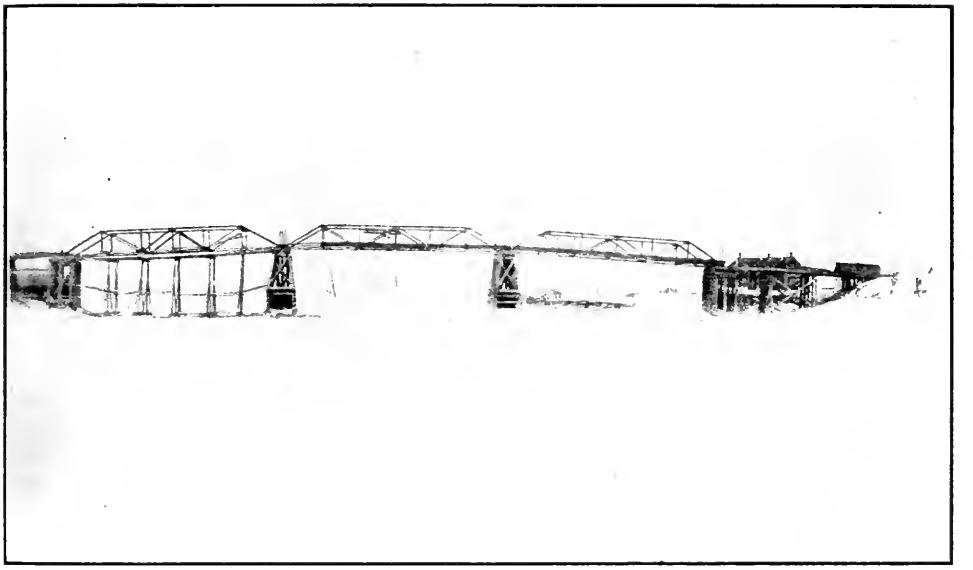
River Valley Bridge, Sturgeon River.—The construction of this bridge described in the report of 1915, was proceeded with during the winter, and the bridge was opened to traffic early in the spring. During the summer the bridge was painted. The full cost of the bridge was $5,852.00.

Temiskaming District Bridges.

Jean Baptiste Bridge, Concession 5, *Armstrong.*—Located over Jean Baptiste Creek at 10th Sideline in the 5th Concession of Armstrong. A timber bridge 72 feet long, comprising a Queen truss span 40 feet long with approach of 16 feet at each end. The abutments are tamarac timber cribs, framed corners, well drift-bolted; stringers are of 3-inch x 12-inch, and the floor 3-inch tamarac plank. Total cost of bridge, $491.55.

Jean Baptiste Creek Bridge, Concession 6, Armstrong.—Located on Lot 10 on the 6th Concession Line of Armstrong. The bridge is 84 feet long, comprising a Queen truss span of 12 feet on double pile piers with a 16-foot approach span at each end. The end piers are also pile bents. Five piles are used in each bent. The piles are braced with 3-inch x 8-inch brace planks, and are capped with 10-inch x 10-inch timbers. Six lines of 3-inch x 12-inch pine stringers, floor 3-inch tamarac plank. 650 cubic yards of earth were placed in the approaches. Total cost $174.71.

Bear Creek Culvert, Harley-Dymond Townline.—Located over Bear Creek at Lot 4. It is a timber culvert 60 feet long, 8 feet wide and 12 feet high inside measure. The side walls of 10-inch x 10-inch timbers rest on transverse mud sills.



Judge Bridge, White River. Steel Spans on Timber Piers.

The side walls are braced with 10-inch x 10-inch posts, mortised into the mud sills and caps. The posts are also cross-braced above the water line. The top consists of a double line of timbers, the bottom transverse row is 10 inches deep, and the top longitudinal line is 16 inches deep. A wing wall 30 feet long is placed at the upstream end and on the west side the wing is tied into the bank. The fill on the west end is about 100 feet long, and on the east end is about 40 feet long. When completed the fill will be from 15 to 18 feet in height. The fill will be completed in the spring, and guard rails erected. $822.00 was expended on the work.

Moffatt Creek Bridges, Kerns-Henwood Townline.—This work consists of two timber bridges on Moffatt Creek at the two crossings in the 2nd Concession on the Townline between Kerns and Henwood. The bridges are built on the same plan and consist of a centre 30-foot King truss span, with approach spans of 16 feet at each end. The piers consist of double rows of five piles each, capped with 10-inch x 10-inch timbers. The truss timbers are 8 inches x 11 inches, needle beam 10 inches x 10 inches, stringers 8-inch flatted jack pine, cover 3-inch tamarac plank.

At the north bridge 710 cubic yards were placed in the filled approaches, and at the south bridge 580 yards were placed. $660.00 was expended on these bridges.

Wabis Bridge, Concession 5, Kerns.—Located over the Wabis Creek on the 8th and 9th Sideline, Concession 5, Kerns. A timber bridge 83 feet long. It has a centre Queen truss span 42 feet long with approach spans of 14 feet at each end. The south end of the truss span is supported on a double pile pier and the north end of the truss rests on a timber crib. The truss members are of pine 8 inches x 12 inches, needle beam 10 inches x 10 inches, stringers 8-inch flatted jack pine, caps 10-inch x 10-inch tamarac, floor 3-inch tamarac plank, railing throughout on each side. Early frost prevented the completion of the necessary grading. This work will be done as soon as the frost leaves the ground. $612.00 was expended on the work.

Wabis Bridge, Concession 4, Henwood.—The renewal of a timber bridge. The new bridge is 42 feet long, consisting of an 18-foot centre span with a 12-foot approach span at either end. Pile piers 4 feet higher than the old bridge support a deck of 8-inch flatted jack pine stringers and a 3-inch tamarac plank floor. The approaches are well graded, 405 cubic yards of earth being used in the fills. $372.00 was expended on the bridge.

Otter Bridge, Hilliard-Brethour Townline.—Constructed in 1915. This year the grading was completed at a cost of $100, making the total cost of the bridge $772.00.

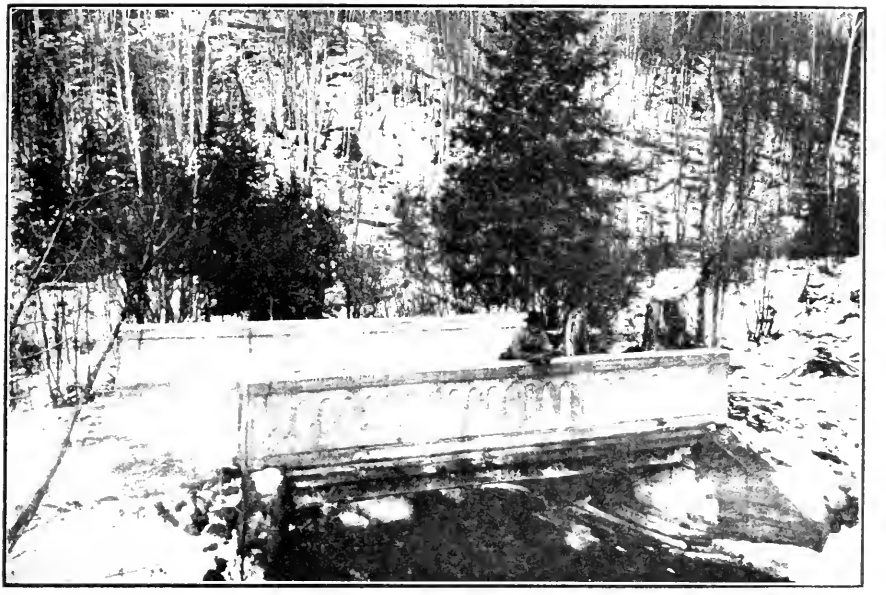
Wright Creek Bridge, Thornloe Road.—Located over Wright's Creek at Lot 7, on the Townline between Casey and Brethour. It is a timber bridge 78 feet long. It has a centre Queen truss span 36 feet long, resting on double pile piers. Approach spans of 16 feet are placed at each end. The outer ends are supported by pile piers. The fill at each end is allowed to fall to a natural slope. Six hundred yards of earth were placed in the fill. Total cost of bridge, $926.00.

The bridges in Temiskaming District were all done under the direction of W. E. Kerr, Road Inspector for the District.

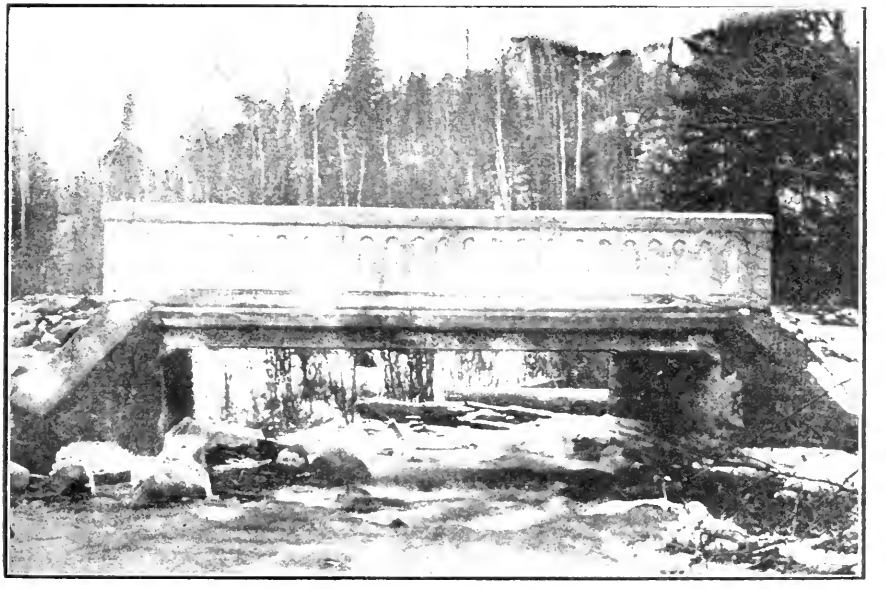
Nipissing District Bridges.

Graham Creek Bridge, 5th Sideline, Chisholm.—Located over Graham Creek on the 5th and 6th Sideline, in the 10th Concession of Chisholm. The bridge is a concrete beam structure on concrete abutments. The bridge provides a 20-foot waterway and a roadway 14 feet in clear width. The abutments rest on a timber grillage bedded well below the bottom of the channel. Four 12-inch x 12-inch beams reinforced with five 1-inch square twisted bars support a 6-inch floor slab, reinforced with ½ and ⅝-inch twisted bars. The railing is a panelled slab supported by four reinforced posts. The approaches are properly graded. The total cost of the bridge was $1,600.

Sparks Creek Bridge, Concession 5, Bonfield.—Located over Sparks Creek at Lot 29 on the road between Concessions 4 and 5, Bonfield. It is a concrete beam structure, with a 20-foot waterway, following the same plan as the Graham Creek bridge above described. The cost of the bridge was $1,500.00.



Spark's Creek Bridge, Con. 5, Bonfield. 20-foot Concrete Beam Bridge.



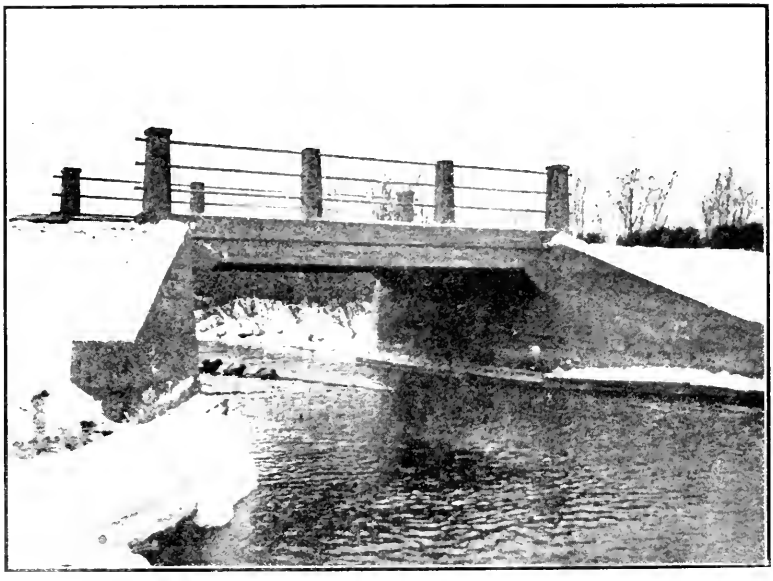
Spark's Creek Bridge, Bonfield. 20-foot Concrete Beam.

Sparks Creek Bridge, Concession 7, Bonfield.—Located over Sparks Creek at Lot 27, on the road between Concessions 6 and 7, Bonfield. It is a concrete beam structure on concrete pile piers. The piers consist of four concrete piles 30 feet long, 14 inches square at the upper end and 8 inches square at the lower end. The concrete beams, 12 inches x 12 inches, are built up from the head of the piles. The beams are reinforced with five 1-inch square twisted bars. A cross beam 12 inches x 12 inches, reinforced with three 1-inch bars, is placed in the middle of the span to distribute the centre load. The railing is a panelled concrete slab supported by four 8-inch x 8-inch posts reinforced with $\frac{1}{2}$-inch bars. A stone fill at each end is allowed to fall to a natural slope. The floor is a 6-inch slab, reinforced with $\frac{1}{2}$-inch and $\frac{5}{8}$-inch bars. The bridge cost $1,196.00. These three bridges were built by H. King, Public Works foreman.

Wassa Bridge, 12th Line, Chisholm.—Located over the Wissi-Wassa Creek at Lot No. 14, on road between Concessions 11 and 12, Chisholm. It is a timber bridge 12 feet long, with a roadway 14 feet in clear width. It has a clear span of 30 feet with a King truss supporting the floor. The abutments are timber cribs, framed corners and drift-bolted. The stringers are six lines of 8-inch flatted tamarac. The cover is of 3-inch plank. A substantial guard rail is in place. The approaches are well graded. The work was done under the direction of P. Rochefort, Inspector of Roads for the District, at a cost of $428.00.

Parry Sound District Bridges.

Boyne Bridge, Otter Lake Road, Foley.—Located over the Boyne River on the Otter Lake Road, Lots 132 and 133, Concession A, Foley. A concrete beam



Boyne Bridge, Otter Lake Road. 20-foot Concrete Beam.

structure on pile foundations. It has a 20-foot waterway with a roadway 14 feet in clear width. The abutments are 5 feet wide at the base and are 12 feet in height to the floor level. The wing walls at each of four corners are 10 feet 6 inches long.

The deck consists of four 12-inch x 12-inch concrete beams, reinforced with five 1-inch square twisted bars. The floor is a slab 8 inches thick at centre line and 6 inches thick at curb line, reinforced with ⅝-inch transverse bars and ½-inch long bars. The railing consists of three lines of 1½-inch galvanized pipe, supported by four 10-inch x 10-inch posts, reinforced with four ½-inch bars. The approaches are well graded and supplied with a substantial guard rail. The bridge was constructed by Amos Train, Public Works foreman, at a total cost of $1,814.00.

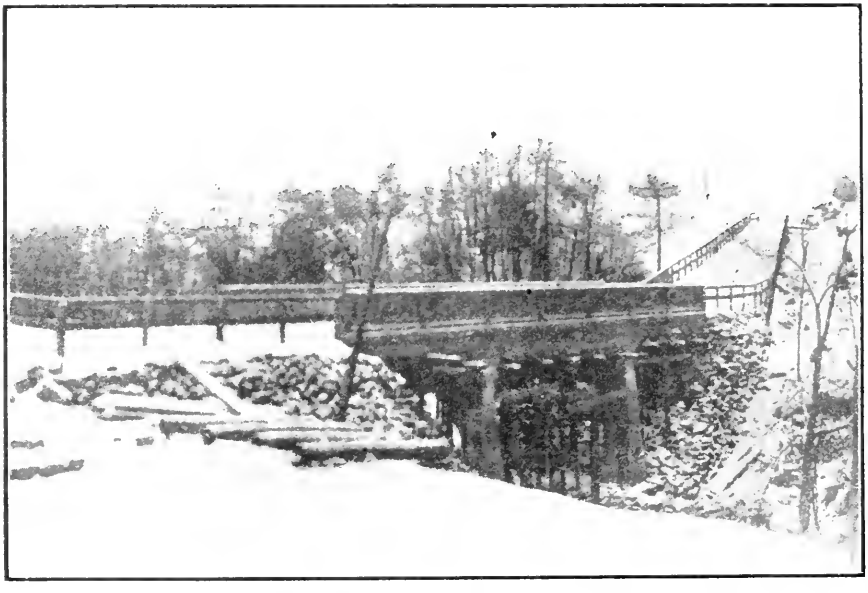
Black Creek Bridge, Gurd Townline.—Located over Black Creek opposite the 3rd Concession of Gurd, on the boundary between Gurd and Himsworth. The deck of the old bridge was destroyed by bush fires. The stone piers were in fair condition and it was decided to place a concrete beam deck on the old piers. The damaged tops of the old piers were removed and rebuilt of concrete. The bridge has a clear span of 31 feet. The new deck consists of four beams 15 inches wide and 30 inches deep below the floor. Each beam is reinforced with seven 1-inch bars tied to floor bars with stirrups of No. 7 wire. A cross beam to distribute the load is placed at the middle of the span. This beam is 14 inches wide and is reinforced with five 1-inch bars. The floor slab is 8 inches thick at the centre line and 6 inches thick at the curb line. It is reinforced with ⅝-inch transverse bars set at 8-inch centres and with ½-inch long bars set at 12-inch centres. The railing is a panelled concrete slab supported by five 10-inch x 10-inch posts, reinforced with four ½-inch bars. The grading is faced with stone to resist the action of the water. This bridge was built by T. J. Paget, Public Works foreman, at a cost of $900.00.

Little East Bridge, Concession 1, Perry.—Located over the Little East River, at Lot 20, Concession 1, Perry. It is a concrete beam bridge on concrete abutments on the same plan as Boyne bridge before described. It has a clear span of 20 feet. The abutments rest on a timber grillage, extending across and set well below the bottom of the channel. The bridge was built by T. J. Paget, Public Works foreman, at a cost of $1,600.00.

Hurd's Bridge, McKellar.—Located over the Manitowabin River at Lot 22, on the road between Concessions 4 and 5, McKellar. The bridge consists of 70-foot steel span on timber crib abutments. The abutments are 18 feet in height to the floor level. The cribs are 18 feet long and 8 feet wide, built of 10-inch x 10-inch square timber, with dove-tailed corners. Centre cross ties are placed 30 inches apart, and framed and drift-bolted into the side timbers. Vertical posts of 10-inch x 10-inch timbers are placed inside at each corner. The side and end timbers are bolted to this post with ¾-inch bolts placed at 30-inch centres. The steel span is supplied with steel stringers. Each shoe plate of the truss rests on a steel seat composed of two 12-inch I-beams 8 feet long. These I-beams are bolted to the crib timbers. The floor is of 3-inch tamarac plank. Heavy fills are required at each end. In all 1,450 cubic yards of earth are used in the fills. The toe of each fill to water level is built of stone. Substantial guard rails are placed at each side of each fill extending 50 feet from the bridge. The steel span was supplied by the Dominion Bridge Company at a cost of $850.00. The bridge was constructed and the steel erected by Amos Train, at a cost of $2,192.00, making the total cost of the bridge $3,042.00.

Old Man Creek Bridge, Spence.—Located over Old Man Creek at Lot 66, on the Nipissing Road in Spence. It is a concrete beam structure with a clear span

Little Kashee Bridge, Muskoka Road. Concrete Trestle, 78 feet long.



Little Kashee Bridge, Muskoka Road. Concrete Trestle, 78 feet long.

of 26 feet, with a roadway 14 feet in clear width. The abutments of concrete are 11 feet 6 inches in height to the floor level and rest on pile foundations. The floor beams are 14 inches wide and 20 inches deep below the floor. They are reinforced with seven ¾-inch square twisted bars. A cross beam in the middle of the span, 12 inches x 20 inches, is reinforced with three ¾-inch bars. All the beam bars are tied to the floor bars with stirrups of No. 7 wire. The floor is reinforced with ½-inch cross bars set at 8-inch centres and with ½-inch long bars at 12-inch centres. The railing consists of three lines of 1½-inch galvanized pipe supported by four 12-inch posts reinforced with ½-inch bars. The approaches are well graded. This bridge was constructed by T. J. Paget, Public Works foreman, at a cost of $1,694.00.

Muskoka District Bridges.

Little Kashee Bridge, Muskoka Road.—Located over Little Kashee Creek on the Muskoka Road on Lot 12, Concession 5, Morrison. The structure is a concrete beam trestle 78 feet long, with a roadway 14 feet in clear width. It has a clear height of 22 feet above water level. The centre span is 30 feet long with an approach span of 20 feet at each end. The deck is supported on concrete pedestals. The centre pedestals have an arched top and the end pedestals are capped with a flat beam. The beams over the centre span, four in all, are reinforced with eight 1-inch bars tied to floor bars with stirrups of No. 7 wire. The beams in the approach span are reinforced with six 1-inch bars. The floor slab, 8 inches thick at centre line and 6 inches thick at curb, is reinforced with ⅝-inch transverse bars set at 8-inch centres, and with ½-inch long bars set at 12-inch centres. The railing is a panelled slab supported by eight posts 12 inches square, reinforced with four ½-inch bars. The fill for approaches is made of stone which falls to a natural slope around the pedestals. The new floor is 8 feet higher than the old, and the approaches at each end have been straightened and the grade reduced by blasting rock. P. R. Switzer, Public Works foreman, had charge of the construction, and carried out the entire work at a cost of $2,731.

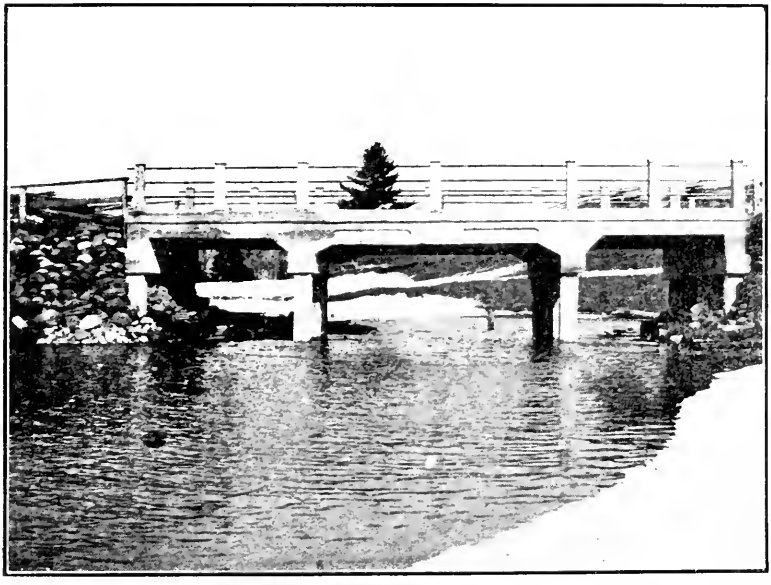
Long Lake Bridge, Stephenson.—This work consists of a side hill road and the construction of a new road and bridge along the south-east shore of Long Lake, in the Township of Stephenson. The rock cut extends along the face of a hill about 400 feet. The hill has a slope of about 45 degrees. The bottom of the lake was too soft to support the rock fill attempted, and it was found necessary to cut the roadway full width from the rock face. The cut has a vertical height at the back from 10 to 20 feet, and a base width of 18 feet. A dry stone wall is placed at the outer side of the roadway for protection. The roadway west of the rock cut to connect with the existing road, is 1,200 feet long. It has been graded and gravelled. A timber bridge has been provided across a creek, the outlet of Long Lake. The creek channel has been improved for a distance of 400 feet from the lake to lower the level of the lake and prevent the flooding of the new road provided. The work as completed cost $4,230.00.

Sucker Creek Bridge, Bala Road.—Located over Sucker Creek on the Bala-Port Carling road in the Township of Medora. It is a concrete beam structure with a clear span of 28 feet 8 inches, and a roadway 14 feet in clear width. In order to straighten the road the bridge was moved down stream 30 feet from the old site. To avoid obstructing the flow of water the bridge is built on skew. The

abutments are rubble masonry set in cement mortar on a solid rock foundation. The floor is supported by four concrete beams 14 inches wide and 30 inches deep below the floor. The beams are reinforced with seven 1-inch twisted bars. These bars are tied to the floor with stirrups of No. 7 wire. The floor is reinforced with ⅝-inch transverse bars and ½-inch long bars. The railing is a concrete slab supported by four 10-inch x 10-inch posts, reinforced with 1½-inch bars. The approaches have been graded and gravelled. This bridge was constructed by Wm. Lowe, Public Works foreman, at a cost of $1,560.

East Simcoe Bridges.

Hobart Bridge, Medonte.—Located over the Coldwater River on road between Lots 8 and 9, Concession 7, Medonte. The bridge is concrete trestle on concrete pile. The overall length is 43 feet 6 inches, and the roadway 14 feet in clear width. The centre span is 18 feet long and the approach spans at each end are 12 feet long. The concrete piles are 26 feet long, 14 inches square at upper end and 8 inches square at bottom. They are reinforced with four ¾-inch bars and wound with



Hobart Bridge, Con. 7, Medonte. Concrete Pile Trestle, 43 feet long.

No. 7 wire. Four piles are used in each bent. The reinforcing bars project 12 inches above the head of piles. Caps, 18 inches wide and 18 inches deep, reinforced with 1-inch bars, are built up from the head of the piles. The four concrete beams are reinforced with five 1-inch square twisted bars tied to floor bars with No. 7 wire. The beams over centre span are 12 inches x 18 inches, and over shore spans 12 inches x 12 inches. The floor is a concrete slab 8 inches thick at centre line and 6 inches thick at curb, reinforced with ⅝-inch transverse bars and ½-inch long bars. The railing consists of three lines of 1½-inch galvanized pipe, supported by seven 10-inch x 10-inch posts, reinforced with four ½-inch bars. The stone fill is allowed to fall to a natural slope around the end bents. The approaches are well graded. The bridge cost $1,859.

North River Bridge, North Orillia.—Located over North River on the 10th Sideline in the 5th Concession, North Orillia. It is a concrete beam bridge on concrete abutments. The abutments are carried down 8 feet below water level to solid rock. They are 17 feet in height to floor level. They are supplied with wing walls 14 feet 6 inches long. The deck consists of four concrete beams giving a clear span of 30 feet. The beams are 14 inches wide and 30 inches deep, reinforced with seven 1-inch square twisted steel bars. These bars are held to the floor bars with stirrups of No. 7 wire. The floor is a 6-inch concrete slab reinforced with ½-inch and ⅝-inch bars. The railing consists of 3 lines of 1½-inch galvanized pipe, supported by five 12-inch x 12-inch posts, reinforced with four ½-inch bars. The approaches are well graded and gravelled. The cost of this bridge was $1,979. These bridges were built by Amos Train, Public Works foreman.

VICTORIA AND PETERBOROUGH BRIDGES.

Grizzell's Creek Bridge, Lutterworth.—Located over a creek at Lot 14, on the 6th Concession of Lutterworth. It is a box culvert built of stone set in cement mortar. The waterway is 5 feet 6 inches wide and 5 feet high. The fill is 12 feet in height above top of culvert, and the ravine is 76 feet wide. A substantial guard rail is placed at each side of the fill. The bridge was constructed under the direction of Wm. Kennedy, Superintendent Public Works, at a cost of $398.

Seventh Concession Bridge, Lot 25, Fenelon.—This bridge was built by the Township of Fenelon at a cost of $860. It consists of concrete abutments, six lines of steel floor joist, and a concrete floor. It has a clear span of 24 feet and a roadway 16 feet wide. The approaches are well graded. The work was inspected by Wm. Kennedy, Superintendent of Public Works, and on his report the grant of $300.00 to this bridge was paid to the Township of Fenelon.

Middleton (Sheriff's) Creek Bridges, Verulam.—This work consists of two concrete arch bridges. The first bridge is located over Sheriff's Creek on the quarter line between Lots 5 and 6, in the 3rd Concession. The second bridge is located on the road between Lots 6 and 7, on the 4th Line. The arch is 16 feet wide and 8 feet high. The fill is from 2 to 8 feet in height, and extends back about 30 feet at each end of bridge. A gas pipe guard rail supported by cedar posts is placed at each side of the fill. The fill is protected on each side by a dry stone wall. The work on both bridges was done by the Township of Verulam at a cost of $644.31. Wm. Kennedy, Superintendent Public Works, inspected the work and on his report the grant of $500.00 voted for these bridges was paid to the Township of Verulam.

NORTH HASTINGS BRIDGES.

Carlow Township Bridges: York Branch Bridge at Lot 21, Concession 10, Carlow.—Work consisted in putting a new deck on the bridge over a length of 65 feet, at a cost of $175.76.

Mud Lake Bridge.—Over Mud Creek, Lot 10, Concession 3, Carlow. A timber bridge. Three stone-filled cedar piers support a deck composed of flatted cedar stringers and cover. One span is 35 feet long and the other span 14 feet long. The approaches are filled with stone and clay. $123.00 was expended on the work.

Trout Creek Bridge, Faraday.—Located over Trout Creek at Lot 9, Concession 16. A timber bridge with an 18-foot waterway; piers of cedar timber, stone-filled; stringers, five lines 10-inch flatted; cover 6-inch flatted cedar; guard rail in place. Approaches 30 feet long at each end built up of stone. Cost $207.00.

Dean's Bridge, Lavally Creek, Faraday.—Located over Lavally Creek at Lot 29, Concession 3, Faraday. It is a timber trestle 81 feet long with 14-foot roadway, and consists of five bents set at 16-foot centres. The centre bents are 24 feet high and the end bents 12 feet high. The bottom is solid rock. Four posts, 10 inches x 12 inches, are placed in each bent. The posts are mortised and dowel pinned to sills. The bents are well cross-braced, and are also braced in line of bridge. Five lines of 10-inch flatted stringers support a 3-inch plank floor. A substantial guard rail, which extends over the fill at each end, is placed at each side. A heavy stone fill at each end of the bridge is allowed to fall to a natural slope around the end bents. The full cost of the bridge and fill was $972.00.

McArthur Mills Bridge, Mayo. Located over Libby Creek at Lot 24, Concession 14, Mayo. It has a clear span of 24 feet; piers of squared cedar; five lines of 10-inch flatted cedar support a floor of 6-inch flatted cedar; guard rail in place. The approaches to the bridge over a long flat, flooded in high water, have been properly graded, and a guard rail erected at each side of the grade. $300.00 was expended on the work.

Papineau Creek Bridge, Montcagle, Wicklow Boundary.—Located over Papineau Creek at Lot 16. The bridge is 61 feet long, with two spans of 20 feet each, and three piers 8 feet wide. The piers are built of cedar and are filled with stone. Five lines of 10-inch flatted cedar stringers support a floor of 6-inch hewn cedar; guard rail in place. The approaches are filled with rock and earth, and a guard rail is placed at each side of fill. $789.00 was expended on the work. These bridges were all constructed under the direction of Walter Wiggins, Road Inspector for the district.

ADDINGTON BRIDGES.

Cross Lake Bridge, Kennebec.—Located over the Narrows of Cross Lake on the Arden-Harlowe Road at the line of Lots 19 and 20, in the 8th Concession of Kennebec. It consists of a stone fill from each shore of the lake, with two 80-foot steel spans over the channel. The rock fill extends out about 160 feet from the north shore and 80 feet from the south shore. The water is from 16 to 24 feet in depth, and the bottom is a very soft, light mud. The rock sank in the mud, and, in places the rock fill is about 40 feet deep. The fill is 18 feet wide on the top, the stone falling to a natural slope. The greater part of the rock for the fill was quarried from a hill on the north shore. The quarry provides a roadway on a proper grade connecting the bridge with the highway to the north. Light concrete piers are built up from the rock fill at each end of the channel span. The centre pier rests on piles in a rock-filled crib placed in the middle of the channel. Three rows of piles with six piles in each, set at 2-foot centres, are driven to the rock bottom. A timber crib 22 feet long, 12 feet wide, surrounding the nest of piles, was sunk well into the mud bottom. Stone was piled around the bottom of the crib outside. The crib was then filled with stone to the top, which is placed at high water. The piles were cut off 12 inches below low water level. The concrete

pier is built up from the head of the piles. Two 80-foot low truss spans with a clear width of 14 feet are placed across the channel. The steel spans are completed with a 6-inch concrete floor reinforced with a 3-9-30 floor mesh. A substantial guard rail is placed at each side of the fill. The steel spans were supplied by the Dominion Bridge Company for $3,270, f.o.b. Arden. The work, including erection of steel, was all done under the direction of C. R. Dolmage, foreman Public Works. The total cost of the bridge, including steel, was $17,647.31. The County of Frontenac contributed $7,500 towards the cost of the bridge.

Frontenac Bridges.

Fish Creek Bridge, Parham.—A concrete beam bridge over Fish Creek, constructed at the Village of Parham, in the County of Frontenac, has a clear span 20 feet long, with a roadway 14 feet in clear width. The abutments are of concrete 14 feet high to floor level. The deck consists of a 6-inch floor slab, reinforced with a steelcrete floor mesh. The floor is supported by four concrete beams 12 inches x 12 inches, reinforced with two 21-lb. steel rails. The railing consists of three lines of 1½-inch galvanized pipe supported by four reinforced 10-inch x 10-inch posts. The approaches are well graded and protected with a substantial guard rail. The fill at the west end is 60 feet long, 20 feet wide on top, and from 2 to 9 feet high. The east fill is 138 feet long, 20 feet wide, and from 2 to 12 feet high. The bridge was constructed by the Township of Hinchinbrook under the plans supplied by the Department. The Department contributed $500.00 towards the cost of the bridge.

Howell's Bridge in Clarendon.—This work consisted in building approaches to Howell's bridge over a boggy marsh. Cedar timbers are buried in the bog and a 5-foot fill built up from the timber bed. A new deck was placed on the bridge. The Department contributed $150.00 towards the work, which was done by the Township of Clarendon.

Renfrew Bridges.

Combermere Bridge, Renfrew.—This work consists of the renewal of the bridge at Combermere over the Madawaska River. The old wooden bridge, worn and rotten, had become dangerous. It was 320 feet long and included a swing span to provide for navigation. It was decided to replace the timber spans with steel. The old wooden piers were removed to low water level and rebuilt with 10-inch x 10-inch pine timber to the necessary height, about 10 feet. Two 64-foot spans and a 62-foot swing span were installed. The new structure provides a roadway 14 feet in clear width. The swing span provides a boat channel 18 feet 6 inches in clear width. The timber approaches at each end were removed, and the spaces, 40 feet at east end and 85 feet at west end, were filled in with rock and earth. The new bridge is 191 feet long. The fill at each end is protected by a substantial guard rail. The steel structure is supplied with steel joist which support a 3-inch plank floor. The steel was supplied by the Hamilton Bridge Works Company at a cost of $1,950.00 f.o.b. Barry's Bay. The work, including the erection of the steel, was done under the direction of P. R. Switzer, Public Works foreman. The total cost of the bridge was $6,978.00.

Foy Bridge, Admaston.—Located at Lot 24, South Bonnechere range. It is a concrete arch bridge 24 feet with a fill 230 feet long. The Department contributed $100.00 towards the work, which was done by the Township of Admaston.

Hill's Bridge, Admaston.—Located at Lot 22, Concession 8. A timber bridge 40 feet long. The piers are of cedar 16 feet long, 12 feet high and 12 feet wide. The cover is of 6-inch flatted cedar, resting on five lines of flatted cedar stringers. The approaches are protected with a wire fence on each side. The east approach grade is 70 feet long and the west approach 20 feet long. The Township of Admaston furnished the material and the Department did the work at a cost of $100.00.

Highland Creek Bridge, Griffith.—Located over Highland Creek at Lots 5 and 6, in Concession 5, Griffith. A timber bridge 95 feet long, built on four timber piers 16 feet long, 8 feet high and 6 feet wide. Four lines of 10-inch pine stringers support a floor of 6-inch flatted cedar. A substantial guard rail is placed on each side over bridge and fill. The west approach is 40 feet long and the east fill is 20 feet long. $200.00 was expended on the work.

Watson Bridge, Brudenell.—Located over Watson's Creek on the Opeongo Road in Brudenell. The structure is 40 feet long; has two piers 8 feet wide, with a waterway 24 feet clear. The piers are built of pine timber and are stone-filled. Five lines of 10-inch flatted pine stringers support a 3-inch pine plank floor. Guard rail in place. The approaches are well graded. $300.00 was expended on the work.

The work in the Renfrew district was all done under the direction of H. N. Moss, Road Inspector for the district.

Norman Dam Repairs.

A new deck was placed on the dam and all worn-out stop-logs discarded and new logs installed. Forty-five new logs 16 inches x 16 inches square, and 22 feet long, and 67 new logs 16 inches x 16 inches square, 16 feet 6 inches long, of British Columbia fir were procured and properly equipped. Thirty-five logs from the 22-foot sluices with the ends worn off were cut down to fit the 16-foot openings. This means that 147 logs, worn and unserviceable, have been replaced by logs in proper condition. The new deck consists of a 3-inch plank cover on 8-inch x 10-inch stringers, all of the best quality of British Columbia fir. The work was done under the direction of James Fraser, Inspector of Public Works for the district, at a cost of $3,433.

MAINTENANCE LOCKS, DAMS, DREDGING, ETC.

Dredging.—The dredge continued operations in the fall of 1915 in Indian River below Port Carling. Fifty-one scow loads were removed at Bailey's Point. In November 63 scow loads of sand and boulders were removed from a bend below the locks. The dredge was laid up for the winter at Gravenhurst on December 14th. In the spring of 1916 the dredge was moved to the channel behind Beaumaris Island. From this channel, which connects Milford Bay with Bracebridge River,

369 scow loads were removed. In the latter part of July work was resumed on the Indian River below Port Carling; 216 scow loads were removed from the cut. On September 9th the dredge was moved to the Narrows at the head of the Joe River, where a proper channel for large launches is to be provided. This channel will effect a material shortening in distance between the head of Lake Rosseau and Lake Joseph on the Canadian Northern Railway. Work will be resumed in this cut in the spring.

Twenty-nine buoys to mark the navigable channels were placed at the following locations:

At entrance to Barlocken Post Office	2
On shoal between Buck and Beaumaris Islands	2
At north end of Beaumaris	2
In Milford Bay	8
Between Acton Island and mainland	2
Bala Bay and opposite Stewart's Point	1
On shoal out from Keewadin Island	1
Joe River between bridge and Tuck's Narrows	1
At Tuck's Narrows	4
East side of Joe River Narrows	4
West side of Joe River Narrows	2

Magnetawan Lock.

The guide piers below the locks were rebuilt and raised 8 inches above the old level. The wharf above the locks was also rebuilt and raised eight inches higher than formerly. The wickets of the lock gates were repaired. The swinging gear of the Magnetawan bridge was also repaired. Five buoys were set out in the Magnetawan waters—two at Cecebe lighthouse, one above the swing bridge and two below the swing bridge.

Port Carling.

Preparations were taken before the close of navigation in 1915 for the construction of the Carling dam. Lumber, wood, cement, etc., were placed at the site, but it was found that the advance in material and scarcity of labour would greatly increase the cost. It was decided to hold over the construction until conditions improved. The material provided was used on other public works in the locality.

A new upper deck of 2-inch plank 8 feet long was placed on the bridge over the river.

Repairs to the wharf consisted in renewing broken and rotten planks in the platform.

At Port Sandfield the swinging gear of the bridge was repaired.

At Huntsville Locks the diver closed leaks under the miter sill of the upper gates. A new chord was placed under the gallows frame of the dam.

At Peninsula Lake canal sunken logs that obstruct navigation were removed.

At Dollar Lake Dam considerable work was done in tightening up the dam and stopping leaks.

Dryden Dam.—The remains of the old dam which obstructed the outflow from Wabigoon Lake were dynamited and removed.

Rainy River Bridge Repair.

Grassy River Bridge.—A new floor of flatted tamarac was placed on bridge.

McKelvie Bridge.—The grades were brought up to level.

Kenora District Bridge Repairs.

Keewatin Town Bridge.—This is a long timber structure on pile piers. The deck was worn out and rotten. The bridge was entirely overhauled, decayed piles were replaced, new bracing was placed on the piles, the west end of bridge was brought up to proper grade, new trusses were placed, also new stringers and floor of 3-inch tamarac plank. The bridge is now as good as when first constructed. $1,392.00 was expended on the work.

Algoma District Bridge Repair.

Ansonia Bridge.—The fill at the east end of the bridge gave way at the south side and slid into the river. To prevent further slides a crib was placed at this point and filled with stone. The grade was then renewed with stone and clay. The fills at each end of the bridge were rip-rapped with stone.

Cringo Bridge, Victoria.—A timber bridge, 20-foot span, framed bent abutments, all built of cedar timber. Approaches well graded. Cost $87.27.

Victoria Bridge, Sec. 26.—Abutments repaired, new flatted stringers, new floor of 3-inch plank 14 feet long, new railing—length 80 feet. Cost $146.49.

Mississauga (iron) Bridge.—Length 260 feet. New upper deck of 3-inch plank 8 feet long placed over entire floor. Cost $86.26.

Marsh River Bridges, Patton.—No. 1 on Concession 2, recovered with flatted cedar. No. 2, on Concession 2, 29 feet long, new cover, 4-inch flatted cedar. No. 3, on Concession 2, 16 feet long, new cover, flatted cedar. No. 4, on Concession 2, Gladstone. New truss beams on sides, with needle beam to strengthen old floor.

Thessalon Town Bridge.—One hundred and thirty-five feet long, refloored with 3-inch tamarac plank 14 feet long. At the east end of the bridge new timbers were placed on the pile pier. $300.00 was expended on the work.

Miller's Bridge, Lefroy.—Located on Section 8; length 158 feet, refloored with 3-inch plank; a new bent put in, also some new stringers, approaches properly graded. Cost of work $112.15.

North Road Culvert, Plummer.—Replacing a bridge washed out by a flood. A concrete box culvert 5 feet x 5 feet inside, 42 feet long, 5-feet wing walls at each corner, walls 14 inches thick, arch top reinforced with ⅝-inch iron, floor 9 inches thick, grade 5 feet high above top of culvert. Four hundred yards of earth were placed in the fill which is 18 feet wide on top. The sides of the fill were rip-rapped with stone. $553.24 was expended on the work.

Shedden Burnt Bridges.—On Section 27.—Span 25 feet, abutments 4 feet high; stringers, cover and railing of hewn cedar. Approaches filled with logs covered with clay.

On Section 35.—Span 14 feet, framed abutments resting on timber grillage. Height 7 feet. Four 12-inch x 12-inch stringers support a floor of 3-inch hemlock plank. Approaches properly graded.

Sudbury District Bridge Repairs.

Blezard Valley Bridge.—On Chelmsford Creek, at Lot 9, Concession 6, Blezard. This work consisted of building stone walls along the side of the road to prevent erosion by the water. The space between the wall and the road was filled with earth. $168.90 was expended on the work.

Onaping River Bridge.—The work consisted of building a solid stone fill at west end of bridge to prevent further erosion of the approach. $97.00 was expended on the work.

Vermillion Bridge, Morgan.—The old timber bridge was carried away by the flood caused by the breaking of the Onaping Lake Dam, a dam constructed and operated by lumbermen in driving timber. The old bridge was located at a bad elbow in the river where it was difficult to protect the approaches. It was decided to select a new location more favourable for a permanent bridge. The new bridge is about 300 feet above the old site. The change of site necessitated the construction of about 1,200 feet of new road. The new bridge is 130 feet long, with a roadway 14 feet in clear width. Two pile piers were driven to accommodate a 60-foot steel span in future. These piers consist of thirteen white pine piles, well braced and planked up to high water level with 3-inch tamarac plank spiked to piles with 8-inch ship spikes. The 45-foot timber truss from the old bridge has been made use of; one end rests on a pile bent, the other on the pile pier. At the west end four 16-foot approach spans are placed. These are covered with five lines of cedar stringers which carry a 3-inch tamarac plank floor. A substantial railing is placed throughout. The approaches have been properly graded. On the west shore a glance boom, 100 feet long, has been placed, and on the east shore is placed a boom 50 feet long. $1,396.00 was expended on this bridge.

Poulin Bridge, Vermilion River, 6th Concession, Balfour.—The work consisted of repairing the east approach damaged by the flood. A new pile bent was driven and a 31-foot timber approach completed. The grade was repaired in proper form.

Vermillion Bridge, Whitefish.—The Onaping flood seriously damaged the timber trestle at the west end of this bridge. The deck was moved from 160 feet of the trestle and a number of piles moved and broken. When the flood subsided the old material was all recovered and replaced. The worn and rotten material was all discarded. About 35 feet of the trestle was refloored. The steel spans over river were thoroughly cleaned and scraped and the steel work was painted with two coats of Ferrodor steel paint. Wm. Craig was in charge of the work. The full cost of the work on this bridge was $1,161.70.

Veuve River Bridge, between Lots 8 and 9, Concession 5, Hagar.—A pile trestle bridge with 10-inch x 10-inch pine stringers and floor of flatted jack pine. This is a new bridge, and $178.00 was expended on the work.

North Branch Bridge, Concession 4, Hagar.—This work consisted in replacing a timber bridge that was wrecked by an ice jam. $81.00 was expended on the work.

Espanola Bridge Repairs.—The work consisted of repairs to the timber trestle at the south end of the bridge. The foundations under the trestle bents were strengthened and a new floor and railing placed over the entire length of trestle, 101 feet. $521.00 was expended on the work.

Sturgeon Falls District Bridge Repairs.

Ebert Creek Bridge, Gibbons.—Forty feet long, double pile piers at each end, ten piles in each pier; stringers, five lines of 8-inch x 16-inch British Columbia fir, cover 3-inch pine plank, guard rails in place, approaches graded up with stones and gravel. D. H. McIntosh, foreman. Cost of work, $221.00.

Queenville Bridge, Field.—Located over Pike Creek; piers of pine and cedar 8 feet x 16 feet and 9 feet high. The piers rest on heavy grillage timbers bedded below the bottom of the creek. Five lines of flatted tamarac stringers carry a 3-inch tamarac plank floor. $169.00 was expended on the work. D. H. McIntosh, foreman.

Maskinonge Creek Bridge, Casimir.—This work consisted in completing the fill at the bridge over Maskinonge Creek, on the 10-11 Sideline. $110.00 was expended on the work.

Temiskaming District Bridges.

Elk Lake Bridge.—A top cover of 3-inch tamarac plank 8 feet long was placed over the entire floor of the bridge, 297 feet long. Minor repairs were made on the swing span.

Protecting White River Bridges.—The booms placed at the different bridges greatly reduced the cost of protecting the bridges. Two or three small jams formed but were broken at small cost. During the winter a quantity of 3-inch tamarac plank was purchased from the settlers and piled up at different stations along the Timiskaming and Northern Ontario Railway, ready for shipping. This material was bought for $16.00 per thousand—13,500 feet of plank was secured.

Nipissing District Bridges.

Cameron Bridge, Lot 1, Concession B.—Span 25 feet, roadway 14 feet, abutments of stone set in cement mortar, cover of flatted cedar, approaches filled with clay and stone. Hills on each side are cut down to ease grade. Guard rail of cedar on each side of bridge and fill. Cost of work $351.00.

Parry Sound District Bridges.

Beaver Lake Bridge.—Located at Lots 3 and 4, Concession 14, Bethune. A timber bridge 40 feet long with a 14-foot roadway. It is a pile trestle with a centre span of 15 feet and end spans of 12½ feet. The water span at this point is 152 feet wide and about 4 feet deep with 3 feet of soft mud in the bottom. The fill is 55 feet long and from 10 to 13 feet in height. The fill is allowed to fall to a

natural slope around the end piers of the bridge. The fill is rip-rapped on each side up to high water level. Both sides of bridge and fill are protected with a substantial guard rail. $1,092.00 was expended on the work, which was carried out by T. J. Paget, Public Works foreman.

Thiel's Bridge, Commanada Creek, Pringle.—A timber bridge 79 feet long, consisting of a truss span 45 feet long and an approach span 20 feet long. Two cedar piers 7 feet x 14 feet and 8 feet high support the truss span. The piers are filled with stone, truss timbers 10-inch x 12-inch pine, cover 3-inch plank. Approaches at each end filled with stone and gravel. $531.00 was expended on the work. D. H. McIntosh, Public Works foreman.

High Bridge, Loring Road, Pringle.—On stage route between Trout Creek and Loring. A timber bridge 64 feet long with a centre span of 20 feet clear width. Two piers 8 feet x 16 feet and 9 feet high, stone-filled, support five lines of heavy flatted stringers. The floor and railing is of hewn cedar. $217.00 was expended on the work. D. H. McIntosh, foreman.

Golden Valley Bridge, Pringle.—Thirty-two feet long. New cover and railing put on. $26.00 expended on the work.

Haliburton Bridge Repairs.

Hollow Lake Bridge.—Located over Hollow River on Hollow Lake Road, about 1½ miles east of Dorset in the Township of Sherbourne. The bridge is 105 feet long, built on two cedar piers 10 feet x 14 feet, and about 12 feet high. The piers were levelled up and an entire new deck put in place. The deck is constructed of flatted cedar. $428.00 was expended on the work.

Addington Bridges.

Clear Creek Bridge.—Located in the Village of Arden. Rock abutments set in cement mortar; cover, 3-inch plank on 10-inch pine stringers. North fill 21 feet long, 20 feet wide; south fill 39 feet long, 22 feet wide. Railing of cedar 59 feet long on each side. The Department contributed $133.00 to the work.

Cross Lake Bridge.—Work was started on this bridge before the appropriation was available as the old float bridge was in a very dangerous condition. $1,718.00 of maintenance money was used on this work.

Renfrew District Bridge Repairs.

Bell's Rapids Bridge.—Located over the Madawaska River at Lot 10, Concession 1, Jones Township. The deck of the bridge was overhauled, the necessary stringers were provided and 75 feet of bridge newly covered with flatted cedar. The approaches were also repaired. $102.00 was expended on the work.

Dacre Bridge.—Located over the Constaw Creek at Lot 11, South Bonnechere Range. A timber bridge 50 feet long. The piers were levelled up with new timbers and a new deck, including railing, put on. The approaches were also properly graded. $51.00 was expended on the work.

Griffiths and Latchford Bridges.—General repairs were done on these bridges to render them safe for travel. The Griffiths bridge must be renewed at an early date.

DRAINAGE WORKS CONSTRUCTED BY THE DEPARTMENT.

Rainy River District Drainage of Roads.

Section 4 Drain, Curran.—The drain cuts the west boundary of Section 4—626 feet north from the south-west corner of the Section. The outlet extends south-west 1,000 feet into a gully with good banks. A drain 3 feet in depth with a 3-foot bottom and side slopes of $1\frac{1}{4}$ to 1 extends north on the west boundary of Section 4—3,500 feet. The excavated earth forms a road grade 16 feet in width. It is intended to extend the drain north to north-west corner of 4, thence east on north boundary of 4 to tap and drain the north road. One and one-quarter miles of the course has been cleared to a width of 66 feet and $1\frac{1}{2}$ miles has been stumped for road grade and ditch.

Lash Drain, Section 28.—This work comprises opening up 1,200 feet of creek on Lot 32 to tap the road south of Section 28. The creek drain is $2\frac{1}{2}$ feet deep and has a bottom width of $1\frac{1}{2}$ feet. On the north side of the road south of Section 25, the ditch extends east 1,500 feet from the creek. This ditch has a bottom width of 3 feet and is from 3 to 4 feet deep. West of the creek the side ditches were cleaned out for a distance of 300 feet.

Carpenter Drain, Lot 2, in 3rd Concession, Soper Creek.—This work consisted of cleaning out 60 rods of Soper on Lot 2 and extended the creek west 100 rods in a new drain to drain the Burriss Road in front of Lot 2. The road ditches have been cleaned out for a distance of 20 rods. A short tap ditch was also run out to the road to drain a troublesome pot hole. Total length opened up 198 rods.

Algoma District Road Drainage.

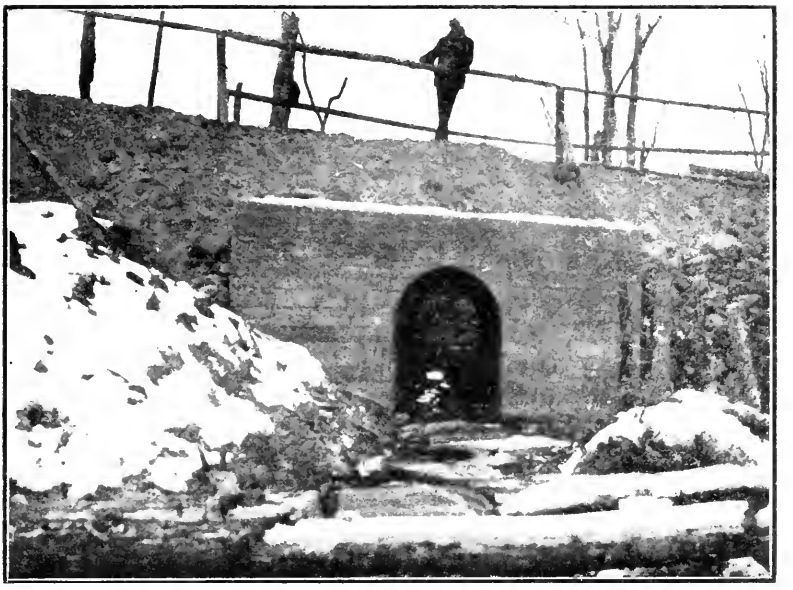
Thessalon Drain, Section 29.—The work commences on a creek at the Canadian Pacific Railway about 100 rods west of the Thessalon Little Rapids Road, and extends northerly 3,200 feet; thence east 2,100 feet to the Little Rapids Road; thence north along the road 1,500 feet to the road south of Section 20; thence east along this road 1,700 feet to the hollow in the road which rendered the drain necessary. The drain has a bottom width of 3 feet; side slopes 1 to 1, with depth from $2\frac{1}{2}$ to 4 feet. This work effectively drains a long section of road that was difficult to maintain.

Cariboo Lake Drain, Johnston.—This work consists of clearing out a creek between Cariboo Lake and Gibboney Lake, a distance of 200 rods. The work lowers the water of Cariboo Lake and drains a section of road that intersects the creek.

Plummer Drain.—Consists of opening up 295 rods of drain on Lots 7 and 8, Concession 4, in Plummer additional. The drain is from 3 to 4 feet deep and from 6 to 8 feet in width.

Sudbury District Road Drainage.

The following drains have been opened up in the Sudbury district:
Capreol, on Lot 3, Concession 3—80 rods.
Broder, on Lots 4 and 5, Concession 6—60 rods.
Rayside, on Lots 8 and 9, Concession 4—240 rods.
Lumsden, on Lot 2, Concession 1—30 rods.
Balfour, on Lot 2, Concession 5—160 rods.
" on Lots 2 and 3, Concessions 5 and 6—400 rods.
" on Lots 8 and 9, Concession 6—240 rods.
" on Lots 11 and 12, Concession 5 and 6—320 rods.
" on Lot 12, Concession 5—240 rods.



North Road Culvert, Algoma.

Manitoulin District Road Drainage.

In the Manitoulin district the following drains were opened up:
Tehkumah, on Lot 11, Concession 10—30 rods.
Sheguiandah, on Lot 21, Concession A—120 rods.
Campbell, on Lot 22, Concession 10—215 rods.
Campbell, on Lots 20, 21, 22, Concession 13—240 rods.
Mills, on Lots 5 and 6, Concession 7, 120 rods.
Burpee, on Lots 22 to 26, Concession 8—370 rods.
Burpee, on Lots 20 to 22, Concession 8,—314 rods.
Billings, on Lots 1 and 2, Concession 4—110 rods.
Gordon, on Lot 19, Concession 4—55 rods.
Gordon, on Lot 18, Concession 4—84 rods.
Gordon, on Lot 22, Concession 8—70 rods.
Allen, on Lots 15, 16 and 17, Concessions 14 and 15—90 rods.
Allen, on Lot 16, Concession 6—150 rods.

Barrie Island, on Lot 17, Concession 1—118 rods.
Barrie Island, on Lots 16-17, Concession 6—180 rods.
Baldwin, Beaudoin Creek, Concessions 1 and 2—600 rods.
Merritt, Black Creek, Concession 4—850 rods.
Bidwell, Lot 16, Concession 10—328 rods.
Assiginack, Lots 4 and 5, Concession 17—117 rods.

Sturgeon Falls District Road Drainage.

The following drains were opened up in the Sturgeon Falls district:
Cosby, on Lots 6 and 7, Concession 2—270 rods.
Burwash, on Lots 7 and 8, Concession 4—200 rods.
McPherson, on Lots 11, 12, 13, Concession 5—20 rods rock.
Hugel, on Lot 3, Concession 3—50 rods—part rock.
Hugel, on Lots 6 and 7, Concession 1—55 rods.
Dunnet, on Lot 5, Concessions 3 and 4—95 rods.
Dunnet, on Lot 8, Concession 4—40 feet rock.
Dunnet, on Lot 7, Concession 4—40 feet rock.
Dunnet, on Lot 10, Concession 4—100 rods.
Casimir, on Lot 4, Concession 4—70 rods.
Casimir, on Lot 4, Concession 4—270 rods creek.
Springer, on Lot 9, Concession 2—110 rods.

Temiskaming District Road Drainage.

Harris Drain, Concession 4.—Located on south part of Lot 2, Concession 4. The drain commences at the intersection of the 4th Line with the line between lots 2 and 3, and extends west through a swale, a distance of 80 rods to a proper outlet. The drain includes a rock cut 18 rods long.

Moose Creek Drain.—The work of 1915 was extended north-west ¾ of a mile to the north road in the 1st Concession of Hilliard. The work consisted of clearing the creek bed and removing beaver dams. The creek now provides a proper outlet for the north road.

Ingram 4th Line Outlet.—An outlet on the line between Lots 4 and 5, from the 4th line south to White River. This outlet was necessary to divert the heavy flow of water on the road that was washing away the roadbed.

Evanturel 3rd Line Drain.—A continuation of the ditch on the north side of the 3rd line from the line between lots 2 and 3 west one mile. The ditch is 5 feet wide and from 2½ to 3 feet deep. The ditch was extended north 80 rods on the line between lots 2 and 3 to drain a wet stretch of road.

Nipissing District Road Drainage.

The following drains have been opened up in the District of Nipissing:
Bonfield, on Lots 24 and 25, Concession 2—80 rods.
" on Lot 29, Concession 2—120 rods.
" on Lots 12, 13, 14, Concession 5—200 rods.
" on Lots 2 and 3, Concession 13—75 rods.
" on Lot 1, Concession 14—60 rods.

Boulter, on Lot 27, Concession 14—60 rods.
Chisholm, on Lot 19, Concession 5—90 rods.
" on Lot 2, Concession 10—20 rods.
" on Lot 8, Concession 12—50 rods.
" on Lots 13 and 14, Concession 13—180 rods.
" on Lot 9, Concession 15—25 rods.
" on Lots 8 and 9, Concession 16 and 17—85 rods.
Ferris, on Lots 14 and 15, Concession 1—50 rods.
" on Lot 19, Concession 1—110 rods.
" on Lot 16, Concession 5—100 rods.
" on Lot 10, Concession 5—50 rods.
" on Lot 25, Concession 5—65 rods.
" on Lot 13, Concession 5—55 rods.
" on Lot 10, Concession 7—85 rods.
" on Lots 15 and 16, Concession 7—55 rods.
" on Lot 18, Concession 7—36 rods.
" on Lot 18, Concession 9—60 rods.
" on Lot 24, Concession 10—33 rods.
" on Lot 17, Concession 10—18 rods rock.
" on Lot 15, Concession 12—40 rods.
" on Lot 17, Concession 13—18 rods.
" on Lot 18, Concession 12—50 rods.
" on Lots 11 and 12, Concession 15—73 rods.
Papineau, on Lots 11 and 12, Concession 10—91 rods.
" on Lot 14, Concession 10—18 rods.
" on Lot 11, Concession 11—130 rods.

In all, $1,986.00 was expended on this work, which was carried out under the direction of P. Rochefort, Road Inspector for the District.

Parry Sound District Drainage.

Himsworth Drain.—The drain in the 25th Concession of Himsworth started in 1915 was continued west from the 25th Sideline, across Lots 26 and 27 to the outlet. The south end of the drain was also extended about 50 rods to tap the concession road. $242.00 was expended on the work.

Jack's Lake Drainage.—This work consisted of rock work on the creek between Jack's Lake and Pickerel Lake in the Township of Armour. This work drains a large section of low land and permits of the proper drainage of the roads in the vicinity. $467.00 was expended on the work.

Muskoka District Road Drainage.

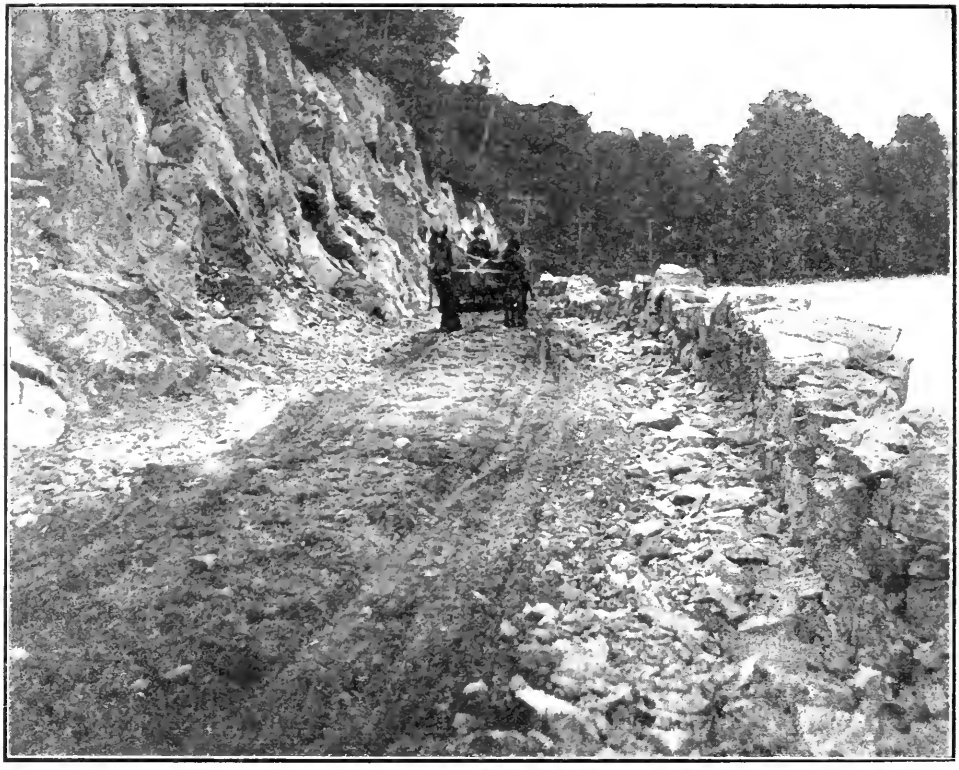
Long Lake Drainage.—The work consisted of the removal of boulders and gravel from the bed of the creek immediately below Long Lake to lower the water in lake and creek that formerly flooded the ground where the new road is opened.

Duck Lake Drain.—This work consists of opening up the outlet of Duck Lake in the Township of Macauley by cleaning out 160 rods of creek, removing a beaver dam and lowering the rock at the falls. East of Duck Lake a rock cut was made 30 feet long and 4 feet deep, and 100 rods of ditch from 3 to 4 feet deep was constructed to drain a small pond that flooded the road. This work was done at a cost of $413.00, and removes a nuisance of long standing.

East Simcoe Road Drainage.

The following drains were opened up in East Simcoe for road drainage. In North Orillia a drain was opened up along the north side of the 15 Sideroad for a distance of 120 rods near the middle of the 5th Concession. A drain was also opened up in front of Lot 1, Concession 4, for a distance of 15 rods to drain a sink hole in the road.

Oro Township.—On the 7th Concession Road in front of Lots 17 and 18, 219 rods of ditch were opened up, and ½ mile of Muck Creek cleaned of logs, brush, etc., to drain a very bad section of road. Without lowering the water of the creek the road could not be properly maintained.



Long Lake Rock Cut, Stephenson. Side Hill Road.

On the Tay and Matchedash Townline a bad section of road was drained by opening up 120 rods of ditch.

Medonte Township.—On the 5th Sideroad, in front of the 12th Concession, 120 rods of ditch was opened up, including 40 rods of outlet to drain a sinkhole in the road.

Where the 10th Sideroad crosses the Coldwater Creek 160 rods of ditch was opened up to drain a section of swamp road.

At Sturgeon Creek at Lots 21 and 22, on the 8th Concession Road, 90 rods of ditch was opened up to drain a sinkhole in the road.

Nottawasaga River Improvement.—This work consists of removing sandbars from the bottom of creek and cutting off short bends. The work commenced about Lot 12 in the 11th Concession of Tecumseth Township, and extended east to Lot 18 $600.00 was expended on the work, which was done under the supervision of Henry Carter.

Rama, 4th Concession Drain.

This work consisted of extending the drain constructed in 1915. The work commenced on the line of Lots 16 and 17 in the 4th Concession at the turn in the drain constructed in 1915. It extends south 900 feet on the line of 16 and 17; thence west on Lot 17—2,000 feet to the Canadian Northern Railway. The drain has a bottom width of 3 feet, side slopes of 1 to 1 and is from 2 to 3 feet deep. The interested parties contributed 25 per cent. of the cost of the work. The Department expended $283.50 on the work, which was done under the supervision of Mr. John Duffy.

Long Swamp Drain, Chandos.

This work consists of opening up a drain through Lots 26, 27, 28, 29 and 30 in the 3rd Concession of Chandos, to drain the 25 Sideline, which line crosses the Long Swamp. The course of the drain was cleared out and brushed. At the lower end of the drain 127 rods of ditch was constructed, with a bottom width of 5 feet and a general depth of 18 inches. The drain will have to be extended 2,900 feet to tap the sideline. $400.00 was expended on the work.

Fish Creek Improvement, Hinchinbrooke.

This work is located between the Parham Road and Long Lake on Fish Creek, through Lots 25, 26 and 27. It consists of removal rock, beaver dams and log jams. $298.00 was expended on the work.

Railway Mileage in Ontario.

During the past year nothing was done on the steam railway lines in the way of extension. In the tables of mileage the Lake Erie and Northern Road has been transferred from the steam to the electric list. The London and Port Stanly line, which has been electrified, has also been transferred. The total mileage of steam roads is now 10,974.98, and of electric roads 895.89.

REVISED STATEMENT OF RAILWAY MILEAGE IN ONTARIO TO DECEMBER 31ST, 1916.

No.	Name of Railway.	Terminal Points.		Completed prior to Confederation.	Completed since Confederation.	At present under construction.	Total length completed of each railway or system of railways in miles.
		From	To	Length in miles.	Length in miles.	Length in miles.	
1	**Grand Trunk Railway,** Main Line	East Prov. Bound	Point Edward	457			
2	do Buffalo and Lake Huron Branch	Fort Erie	Goderich	158			
3	do London Branch	St. Mary's	London	23			
4	do Galt and Doon Branch	Galt	Berlin	7	4.5		
5	do Waterloo Junction Railway	Waterloo	Elmira		10.25		
6	do Toronto and Nipissing Branch	Toronto	Coboconk		88		
7	do Midland Railway, Main Line	Port Hope	Midland	65	54.53		
8	do do Peterboro' Branch	Millbrook	Lakefield	13	9		
9	do Lake Simcoe Junction	Stouffville	Jackson's Point		26.5		
10	do Whitby, Port Perry and Lindsay	Whitby	Lindsay		46		
11	do Victoria Railway	Lindsay	Haliburton		55.81		
12	do Grand Junction Railway	Belleville	Peterborough		64.65		
13	do Belleville and North Hastings	Madoc Junction	Eldorado		22		
14	do Toronto and Ottawa	Madoc	Bridgewater		9		
15	do do Manilla Link	Wick	Manilla		6.5		
16	do do Omemee Link	Omemee	Peterborough		14		
17	do Port Dover and Lake Huron	Port Dover	Tavistock		55.68		
18	do South Norfolk Railway	Simcoe	Port Rowan		17		
19	do Chemong Branch	Peterborough	Chemong Lake		9		
20	do Stratford and Huron	Stratford	Wiarton		106.27		
21	do Owen Sound Extension	Parkhead Junction	Owen Sound		12.40		
22	do Georgian Bay and Wellington	Palmerston	Durham		26		
23	do Northern Railway, Collingwood Line	Toronto	Meaford	94	21		
24	do Muskoka Branch	Barrie	Gravenhurst		53		
25	do Hamilton and Northern, Main Line	Port Dover	Allandale		135.3		
26	do do do Collingwood	Clarksville	Collingwood		40		
27	do North Simcoe Junction	Colwell	Penetanguishene		33.34		
28	do Midland Branch	Wyevale	Tiffin		9		
29	do Birch-Tay Branch	Birch	Tay		8.9		
30	do Northern and Pacific Junction Rlwy	Gravenhurst	Nipissing Junction		111.5		
31	do Magnetawan River Railway	Burk's Falls Station	Burk's Falls Wharf		1.01		
32	do Toronto Belt Line Rly., East Section	Don Station, G.T.R.	Junc. Northern Ry.		8.50		
33	do do Western Section	W. Toronto, on G.T.R	Swansea		4.33		

REVISED STATEMENT.—Continued.

No.	Name of Railway.	Terminal Points. From	Terminal Points. To	Completed prior to Confederation. Length in miles.	Completed since Confederation. Length in miles.	At present under construction. Length in miles.	Total length completed of each railway or system of railways in miles.
	Grand Trunk Railway—continued						
34	do Canada Atlantic Railway	East Prov. Bound	Ottawa		68.08		
35	do Ottawa, Arnprior & Parry So'nd Ry.	Ottawa	Scotia Junction		212.60		
36	do Parry Sound Colonization Ry.	Scotia Junction	Depot Harbor		51.20		
37	do Central Counties Railway	Glen Robertson	Hawkesbury		21		
38	do do do	South Indian	Rockland		17		
39	do Railway { Great Western Div. / Main Line }	Niagara Falls	Windsor	229			
40	do Toronto and Hamilton Branch	Toronto	Hamilton	39.5			
41	do Loop Line Division	Glencoe	Fort Erie		145		
42	do Kingscourt and Glencoe Link	Kingscourt Junction	Glencoe		20.6		
43	do Sarnia Branch	Komoka	Sarnia	51			
44	do Petrolea Branch	Wyoming	Petrolea	7			
45	do Brantford Branch	Harrisburg	Brantford	8			
46	do Brantford and Tillsonburg	Brantford	Tillsonburg		35.88		
47	do Lynden to Brantford	Lynden	Brantford		4.12		
48	do Wellington, Grey and Bruce	Harrisburg	Southampton	27	102		
49	do do S. Extension	Palmerston	Kincardine		66		
50	do G. W. Div., London, Huron & Bruce	Hyde Park Junction	Wingham		69.75		
51	do do Welland Railway	Port Colborne	Port Dalhousie	25			3,079.7
52	**Canadian Pacific Railway** Main Line	East Prov. Bound	West Prov. Bound	57	1,216.40		
53	do Algoma Branch	Sudbury	Sault Ste. Marie		180.25		
54	do Brockville and Ottawa Railway	Brockville	Carleton Place	46			
55	do St. Lawrence and Ottawa Railway and Chaudiere Branch	Prescott	Ottawa	59.5			
56	do Ontario and Quebec Railway	West Toronto	East Prov. Bound	12	281.25		
57	do do Don Branch	Leaside Junction	Toronto		5		
58	do Credit Valley Railway, Main Line	Toronto	St. Thomas		119.13		
59	do do Mimico Branch	Islington	Mimico		2.60		
60	do do Orangeville Branch	Streetsville Junction	Elora & Orangeville		61		
61	do do Guelph Branch	Campbellville	Guelph		15		
62	do Toronto, Grey & Bruce, Main Line	Toronto	Owen Sound		122		
63	do do Teeswater Branch	Orangeville	Teeswater		72		
64	do do Wingham Branch	Glen Annan	Wingham		4.75		
65	do West Ontario Pacific Railway	Woodstock	London		26		

REVISED STATEMENT - Continued.

No.	Name of Railway.	Terminal Points.		Completed prior to Confederation.	Completed since Confederation.	At present under construction.	Total length completed of each railway or system of railways in miles.
		From	To	Length in miles.	Length in miles.	Length in miles.	
66	C.P.R. West Ontario Pacific Rly..Detroit Extension	London	Windsor		112.50		
67	do Atlantic and North-West Railway	Renfrew	Eganville		19.25		
68	do Lindsay, Bobcaygeon and Pontypool Ry	Burketon	Bobcaygeon		38.79		
69	do Sudbury and Toronto Branch	Bolton	Romford Junction		226.20		
70	do South Ontario Pacific Railway	Guelph Junction	Hamilton		16.3		
71	do Guelph and Goderich Railway	Guelph	Goderich		88		
72	do do Listowel Branch	Listowel Junction	Listowel		16.10		
73	do Walkerton, Lucknow Railway	Saugeen Junction	Walkerton		37.70		
74	do Tillsonburg, Lake Erie & Pacific	Port Burwell	Embro		46.11		
75	do St. Mary's & Western Ontario Ry	Embro	St Mary's		15.90		
76	do Georgian Bay & Seaboard Railway	Port McNicoll	Bethany		90.86		
77	do Campbellford,Lake Ontario and Western Railway	Glen Tay Junction	Agincourt		182.60		
78	do Glengarry and Stormont Railway	Cornwall	St. Polycarpe Jct.		27.00		
79	Kingston & Pembroke Railway	Kingston	Renfrew		103		3,300.19
80	**Michigan Central Railway**, formerly Canada						
81	Southern, Main Line	Windsor	Niagara Falls		226.80		
	Michigan Central Railway, St. Clair Branch	St. Clair Junction	Courtright		62.2		
82	do do Amherstburg Branch	Amherstburg	Essex Centre		15.7		
83	do Oil Springs Branch	Oil City Junction	Eddy's		5.2		
84	do Petrolea Branch	Petrolea Junction	Petrolea		4.9		
85	do Leamington & St. Clair Branch	Comber	Leamington		15.9		
86	do Fort Erie Branch	Welland Junction	Fort Erie		17.4		
87	do Niagara Branch	Fort Erie	Niagara	30			378.10
88	Cobourg, Peterboro' & M'mora Ry., M'mora Line	Cobourg	Harwood	14.5			14.50
89	Lake Erie and Detroit River Railway	Walkerville	St. Thomas		126.85		
90	do Erie and Huron Railway	Rondeau	Sarnia		70 47		197.32
91	**Canadian Northern Railway.** Port Arthur, Duluth and Western Railway, and Ontario & Rainy River Railway, Main Line	Port Arthur	West Prov. Bound		287		
92	do do Duluth Extension	Stanley Junction	Gun Flint Lake		66.54		
93	do do James Bay Railway	Canada Atlantic Ry.	Parry Harbor		3.7		
94	do do Toronto & Sudbury Line	Toronto	Sudbury		265		
95	do do Key Branch	Key Junction	Key Harbor		6.2		

REVISED STATEMENT—Concluded.

No.	Name of Railway.	Terminal Points. From	Terminal Points. To	Completed prior to Confederation. Length in miles.	Completed since Confederation. Length in miles.	At present under construction. Length in miles.	Total length completed of each railway or system of railways in miles.
96	Canadian Northern Ontario, Hutton Branch	Sudbury Junction	Sellwood Junction		27.8		
97	do do Garson Branch	Garson Junction	Garson Mine		3.7		
98	do do Orillia Branch	Orillia Junction	Atherley Junction		7.4		
99	do do Ottawa, Hawkesbury	Ottawa	Hawkesbury		58		
100	do do Ottawa-Capreol	Ottawa	Capreol		304.69		
101	do do Port Arthur, Sudbury	Ruel	Port Arthur		545.00		
102	do do Toronto-Ottawa	Toronto	Ottawa		219.61		
103	do do Central Ontario Railw'y	Trenton, on G.T.R.	Maynooth		110.00	20.00	
104	do do Bay of Quinte Railway	Deseronto	Bannockburn		78.45		
105	do do do do	Yarker	Sydenham		11.37		
106	do do do do	Deseronto	Grand Trunk Ry		3.50		
107	do Irondale, Bancroft and Ottawa Rly	Kinmount	Bancroft		45.00		
108	do Brockville, Westport and Sault Ste. Marie	Brockville	Westport		45.00		
109	do Prince Edward County Railway	Picton	Trenton and G.T.R.		32.44		
110	do Ontario & Belmont & Northern Rly.	Central Ontario Rly.	Belmont Mine		9.57		2,129.97
111	Toronto, Hamilton and Buffalo Railway	Waterford	Brantford		18		
112	do do do	Brantford	Welland		62.5		
113	do do do	Smithville	Dunnville		14.9		95.4
114	Ottawa and New York Railway	Ottawa	Cornwall		55.00		55
115	Pembroke Southern Railway	Pembroke	Golden Lake		21.50		21.50
116	Algoma Central and Hudson Bay Railway	Sault Ste. Marie	Hearst		295.11		
117	do do Michipicoten Branch	Michipicoten Harbor	Main Line		22.10	0.62	317.21
118	Algoma Eastern Railway	Sudbury	Little Current		85.50		85.50
119	Bruce Mines and Algoma Railway	Bruce Mines	Rock Lake		17		17
120	Temiskaming and Northern Ontario Railway	North Bay	Cochrane		252		
121	do do do Branch Lines				71.29		323.29
122	Huntsville and Lake of Bays Railway	Peninsula Lake	Lake of Bays		1.5		1.5
123	National Transcontinental Railway	East Prov. Bound	West Prov. Bound		758		758
124	Grand Trunk Pacific Rly., Lake Superior Branch	Fort William	Lake Superior Junc.		188.77		188.77
125	Thessalon, Northern Ontario Railway	Thessalon Junction.	Thessalon		1.93		1.93
126	Essex Terminal Railway	Walkerville	M. C. Tunnel Yard.		10.10		10.10
				1,422.5	9,552.48	20.62	10,974 98

NOTE.—London and Port Stanley Railway, 25 miles completed prior to Confederation, transferred to Electric Railway Statement.

STATEMENT OF ELECTRIC RAILWAY MILEAGE IN ONTARIO.

Revised to December 31st, 1916.

No.	Name of Railway	Mileage first Track	Mileage second Track	Total	Mileage under Construction	Steam Power	Water Power	Remarks
1	Berlin and Waterloo	3.20	1.53	4.73	.....	1	.....	Hydro-Electric Power from City of Kitchener.
2	Berlin and Northern	3.15	.....	3.15	.....	.....	.....	" " "
3	Berlin, Waterloo, Wellesley and Lake Huron	17.81	1.36	19.17	.....	.....	.....	" " "
4	Brantford Civic	17.18	.....	17.18	.....	.....	.....	" " "
5	Brantford and Hamilton	23.00	.....	23.00	.....	.....	.....	Power supplied by Cataract Power Company.
6	Chatham, Wallaceburg and Lake Erie	40.75	.....	40.75	.....	.....	.....	Power supplied by Chatham Gas Company.
7	Cornwall	6.50	.....	6.50	.....	1	1	
8	Fort William Civic	19.60	.....	19.60	1.66	.....	.....	Power, Hydro-Elec. supplied from Kakabeka Falls.
9	Galt, Preston and Hespeler	15.67	.....	15.67	.56	.....	.....	Power, Hydro-Electric.
10	Leased, Line, Preston-Berlin	10.75	.....	10.75	.....	.....	.....	" "
11	Grand Valley	21.81	.....	21.81	.....	.....	.....	" "
12	Guelph Radial	8.83	.....	8.83	.....	.....	.....	" "
13	Hamilton and Dundas	7.00	.....	7.00	.....	.....	.....	Power from Cataract Power Company.
14	Hamilton, Grimsby and Beamsville	23.00	.....	23.00	.....	.....	.....	" " "
15	Hamilton Street	32.00	.....	32.00	.....	.....	.....	" " "
16	Hamilton Radial	25.00	8.69	33.69	.....	.....	.....	" " "
17	International Railway Co., Niagara Park	11.91	.....	11.91	.....	.....	.....	Subject to control of Niagara Falls Park Commission
18	International Transit	3.58	.....	3.58	.....	.....	.....	Hydro-Electric.
19	Kingston, Portsmouth and Cataraqui	8.00	.....	8.00	.....	1	.....	
20	London and Lake Erie Railway and Transportation Co.	29.00	.....	29.00	.....	.....	.....	Hydro-Electric.
21	London Street	25.73	6.79	32.52	.....	1	.....	
22	Lake Erie and Northern	51.00	.....	51.00	.....	.....	.....	Hydro-Electric.
23	London and Port Stanley Railway	25.00	.....	25.00	.....	.....	.....	"
24	Mount Mackay and Kakabeka	4.00	.....	4.00	.....	.....	.....	
25	Niagara, St. Catharines and Toronto	75.35	.....	75.35	.....	.....	.....	
26	Niagara, Welland and Lake Erie	4.56	.....	4.56	.....	.....	.....	
27	Nipissing Central	15.37	.....	15.37	.....	.....	.....	Power from Northern Ontario Power Company.
28	Oshawa	9.00	.....	9.00	.....	.....	.....	
29	Ottawa Street	26.17	24.03	50.20	.....	.....	1	
30	Peterborough Radial	7.00	.....	7.00	.....	.....	.....	Hydro-Electric.
31	Port Arthur Civic	19.53	.....	19.53	.....	.....	.....	Hydro-Electric, from Kakabeka Falls.
32	Port Dalhousie, St. Catharines and Thorold	8.17	.....	8.17	.....	.....	.....	

33	Sandwich, Windsor and Amherstburg	41.34	.....	41.34	.....	.....	.....	Power from Canadian Salt Company.
34	Sarnia Street	9.25	.....	9.25	.....	.....	.....	Power from Sarnia Gas and Electric Company.
35	St. Thomas Street	7.00	.....	7.00	.....	.....	.....	Hydro-Electric Power.
36	Toronto Civic	20.55	.....	20.55	.....	.....	.....	" "
37	Toronto Mimico	11.11	.....	11.11	.....	.....	.....	Power from Toronto Power Company.
38	Toronto Scarboro	11.45	.....	11.45	.....	.....	.....	" " "
39	Toronto Street	70.05	61.57	131.62	.....	.....	.....	" " "
40	Toronto Suburban	18.79	.....	18.79	46.00	.....	.....	" " "
41	Toronto and York Radial	59.44	.....	59.44	.....	.....	.....	" " "
42	Windsor, Essex and Lake Shore	38.02	1.13	39.15	.....	1	.....	
43	Woodstock, Thames Valley and Ingersoll	10.20	.....	10.20	.....	.....	.....	Power from the Cataract Power Company.
		895.82	105.10	1,000.92	48.22	.....	.....	

Year's Increase 146.44 miles.

PROVINCIAL AID TO DRAINAGE.

Beauchamp Creek Drain and Extension Drain, Township of Grey.—This drain commences at the townline between Grey and Elma Townships, on Lot 35, Concession 16, Grey Township, and follows the course of Beauchamp Creek to its outlet in the Maitland River. It is about 10 miles in length, and the present scheme was undertaken to provide an efficient outlet for a drainage area of about 22,000 acres of land in the Townships of Grey, Elma and McKillop. Within the watershed of Beauchamp Creek numerous artificial drains had been constructed all having their outlet in this creek, consequently the carrying capacity of the old

Diver's Outfit, Public Works Department.

drain was greatly overtaxed, and the present undertaking became necessary. The old drain across Lots 30 to 35 was abandoned and a new ditch following the natural course of the creek was dug. The land along the upper portion of the drain is very low and swampy, and this change in location should give it proper drainage. The bottom width of the ditch varies from 3 feet at the head to 25 feet at the outlet, and is being entirely constructed by dredging. The excavation is completed from its commencement on the townline between Grey and Elma, to the sideroad between Lots 15 and 16, Grey Township. The estimated cost of the work is $24,841, distributed as follows:

Grey Assessment	$16,120.65—	Drainage Area,	16,320 acres.
Elma Assessment . . .	6,539.95—	" "	3,000 "
McKillop Assessment .	2,080.40—	" "	2,890 "
Guelph & Goderich Ry.	100.00		

The work was examined by J. S. Leitch, Assistant Engineer of the Department, in October, 1916, and on his report the grant of $1,000 voted in aid of this scheme was paid to the Township of Grey, the initiating municipality.

Big Creek Drain, Chatham and Dover.—This extensive work was undertaken to provide drainage for a considerable area of land in Chatham Township and an outlet for the waters of a large area of land in Camden Township. Owing to the height to which in flood periods the water in the Thames River rises at the townline between Camden and Chatham, caused by the immense volume of water drained into the river farther upstream, and the level of the lands back a mile from the river being at flood time lower than the level of the river, the Thames cannot be used as an outlet. Consequently it was necessary to open a drain through the creek or swale known as Big Creek to its natural outlet in Lake St. Clair. The drain commences at the Chatham-Camden townline and extends across Chatham and part of Dover Township to Little Bear Creek. It is a little over 20 miles in length and the bottom width varies from 10 feet at the commencement to 20 feet at its outlet in Little Bear Creek. The excavation is being entirely done by a dry land dredge, and to date the drain has been completed from its outlet to Lot 5, Concession 6, Chatham, a distance of a little over 8 miles, about 60 per cent. of the total excavation being completed. Ten highway bridges out of a total of eighteen on the scheme have been completed and open for traffic. They are all permanent structures of steel beams on concrete abutments with concrete floors.

The estimated cost of the complete work is $84,000, and under the Engineer's assessment was distributed as follows:

Chatham Assessment	$62,075.75
Dover Assessment	8,924.25
Camden Assessment	13,000.00

This work was examined by J. S. Leitch, Assistant Engineer of this Department, in October, 1916, and on his report the grant of $5,000, voted in aid of this drainage scheme, was paid to the Township of Chatham, the initiating municipality.

I have the honour to be,

Sir,

Your obedient servant,

A. J. Halford,

Engineer Public Works.

REPORT OF CHIEF BOILER INSPECTOR.

TORONTO, December 18th, 1916.

WALTER A. RIDDELL, ESQ., M.A., PHD.,

Superintendent, Trades and Labour Branch,

Parliament Buildings, Toronto, Ont.

SIR,—I have the honour to submit my fourth annual report of the work done by the Boiler Inspection Branch of the Department of Public Works during the year ending October 31st, 1916.

The following is a summary of our inspection work:—

DRAWINGS AND SPECIFICATIONS SURVEYED AND REGISTERED.

Boilers		97
Boiler Fittings		78
Pipe Lines		31
Pressure Tanks		6
Digesters		4
Superheaters		1
Drawings returned to Manufacturers for correction		17
Registered Boilers inspected during construction		313
Plates examined		1,415
" rejected		16
Registered Boilers inspected by Insurance Companies in the United States		35
Registered Boilers inspected by Insurance Companies in Great Britain		4
New boilers inspected during construction for British Columbia		10
Used Boilers inspected in Ontario		612
Air Tanks " " "		21
Steam Drums " " "		4
Steam Pans " " "		1
Pipe Lines " " "		4
Used Boilers inspected and condemned		23
Class "A" Certificates issued for new boilers		348
Class "B" Certificates issued for used boilers		527
Heating Certificates issued		220
Letters, inwards		3,015
Letters, outwards	4,251	
Letters, outwards (circular)	378	
		4,629
Telegrams, inwards		45
Telegrams, outwards		54

FINANCIAL STATEMENT.

		Revenue Collected.
Designs of boilers and boiler accessories surveyed and registered		$1,276 00
Customs Duty received from U. S. Manufacturers for clearing blue prints		2 34
New boilers inspected:—		
336 at $5.00	$1,680 00	
12 at $2.50	30 00	
		1,710 00

Used boilers inspected:—		
609 at $5.00	$3,045 00	
2 at $10.00	20 00	
1 at $2.50	2 50	
		3,067 50
New boilers inspected for British Columbia:—		
8 at $10.00	$80 00	
2 at $5.00	10 00	
		90 00
Air Tanks inspected, 21 at $5.00		105 00
Steam Drums inspected, 4 at $3.00		12 00
Steam Pans inspected, 1 at $5.00		5 00
Pipe Lines inspected:—		
3 at $5.00	$15 00	
1 at $7.50	7 50	
		22 50
Class "B" Certificates, issued at $1.00, 8		8 00
Class "B" Certificates duplicated		1 00
Heating Certificates issued, 220 at $1.00		220 00
Travelling expenses collected:—		
New Boilers	$108 00	
Used Boilers	2,035 70	
B. C. Boilers	40 00	
		2,183 70
Ledger Balance, credit		73 00
		$8,776 04
Amount remitted to Treasury Department	$8,776 04	
Revenue received during 1915 and credited in 1916 returns ..	807 50	
		$9,583 54
Total amount at credit of this Branch for year ending October 31st, 1916.		$9,583 54

There has been a slight alteration to the Steam Boiler Act in section 2, subsection "D", which formerly read.—

"A portable boiler rated at 25 horse power or under, or a boiler used exclusively for horticultural or agricultural purposes." Now the words *"rated at 25 horse power or under,"* have been omitted. This change in the Act gives us jurisdiction over portable boilers used in public places in conjunction with Contractors' equipment, etc. Boilers of this kind formerly were not built from registered designs and were exempt from our laws. The fact that those boilers are often used in close proximity to hundreds of people is good reason why their designs should be of the most approved type, and also why they ought to be inspected by Boiler Inspectors annually.

You will note from our list of inspections, that we examined a number of Air Tanks during the past year. These Tanks were not subject to steam pressure in any way, but were under air pressure. This inspection work was made at the request of the owners of these vessels, and the customary fee of $5.00 per tank was paid by them. The safe working pressures were determined from our rules governing the construction of steam boilers, and the same certificates which we issue for used boilers were made out for these vessels. The City of Toronto owned

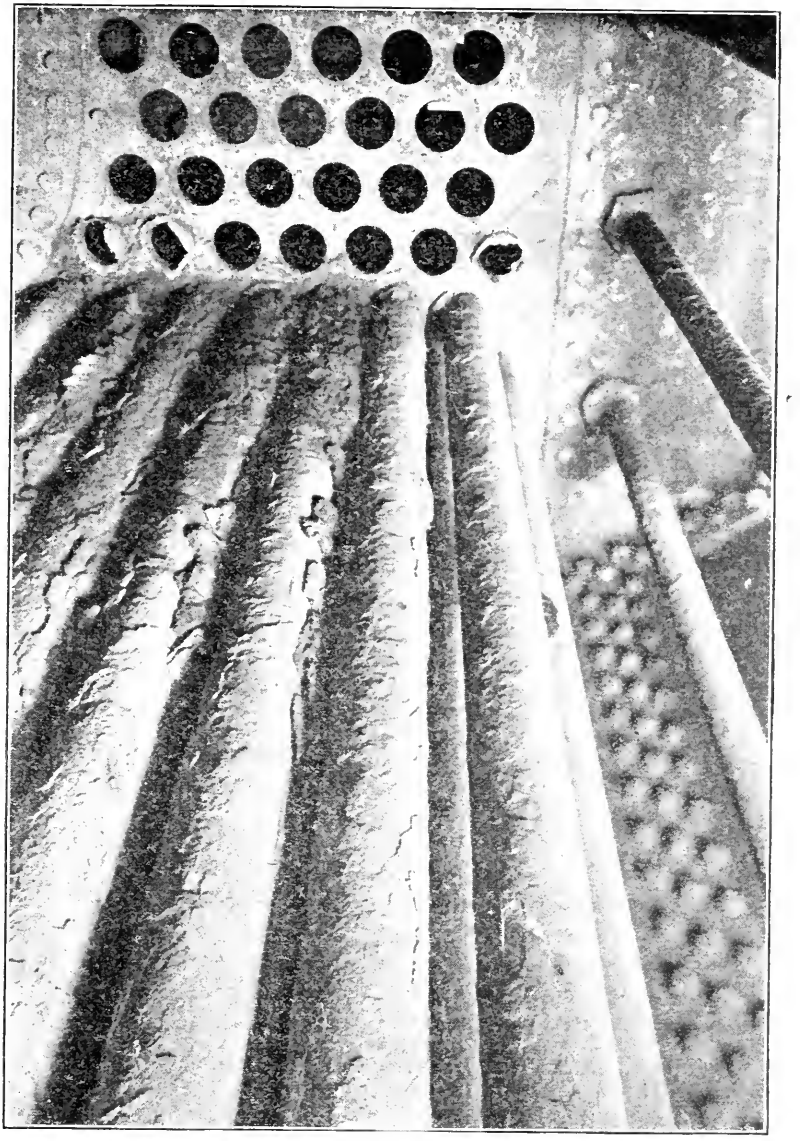
several of the tanks in question, and had experienced considerable trouble due to the manholes leaking when under pressure. The remedy suggested by this Branch was carried out and the defects overcome.

The enormous increase in the price of steel since the outbreak of the war has affected to a considerable extent the manufacture of boilers in Ontario, as elsewhere, by reason of the necessary increase in the selling price. This increased cost of new boilers has created a great demand for secondhand boilers, not only on account of cheapness—for high prices are being paid—but by reason of their being already constructed and fitted for immediate service by such as new munition factories and like industries, which are urgently required to meet the present crisis. Many old and discarded boilers to-day—which in normal times would be sold for scrap iron or left rusting in vacant places around our factories—have been cleaned and painted and put on the market for sale by boiler dealers. Secondhand boilers sold or exchanged being subject to our inspection, extra vigilance is necessary in making inspections of these old boilers if explosions have to be guarded against.

During the past year, we have inspected ten boilers for British Columbia. Arrangements were made last year whereby the inspection of all stationary boilers built in Ontario for British Columbia is now being made by Inspectors of this Branch. Some trouble was experienced heretofore by manufacturers on account of their boilers being re-examined on arrival at their destination, and sometimes the safe working pressure was reduced on account of defects in the workmanship, but I am pleased to say the boilers examined during the past year have been accepted by the British Columbia authorities without being penalized in any way. During normal times, the number of boilers built in Ontario for British Columbia would of course be much more than last year's work.

For some time past, and more especially since the fatal steam valve explosion at Greey's Foundry—hereinafter reported—we have been surveying and registering high pressure pipe lines. It is essential that steam pipes should be well designed and constructed of good material both for the prevention of accidents and the efficient working of the plant. When surveying plans of steam pipe arrangements, we are always very careful to see that the pipes are equipped with good drains where these are necessary, and that such drains from main steam piping and headers are connected to steam traps. It is also important that steam lines should have sufficient flexibility to permit of freedom of expansion, and we always advise that expansion bends be fitted so that there will be no danger of overstrain to the arrangement due to its being over rigid. We are not in a position to make inspections of all new steam pipes after erection, but in the case of large installations we always endeavour to make a final inspection before steam is turned on.

This photograph illustrates the interior of a boiler which was working under adverse conditions. It is easily seen that the boiler has been very badly neglected by permitting the scale forming matters brought in by the feed water to be deposited to such an excessive extent. The average thickness of the scale ranged about two inches, and the spaces between the tubes which should allow the water to circulate,



in many cases were entirely blocked. Apart from the fact that boiler scale resists the passage of heat through it, causing a waste of fuel, and a consequent loss of evaporation, there is a danger of explosions resulting therefrom due to the plates becoming overheated.

In boilers of the H.R.T. type especially, scale must not be allowed to accumu-

late on the bottom of the shell, for if this precipitation is overlooked the unfailing result is that the plates bulge, and if the bulging is not caught in times the plates will eventually rupture. In many instances, we have been called upon to make inspections of boilers which have been damaged in this way—some of which appear in my report—and afterwards required extensive repairs before they could be safely operated again.

In other types of boilers, we have found scale to be the cause of bulged and burnt furnace plates, and also the cause of leaky seams and rivets, and frequently cracked plates near the rivet holes.

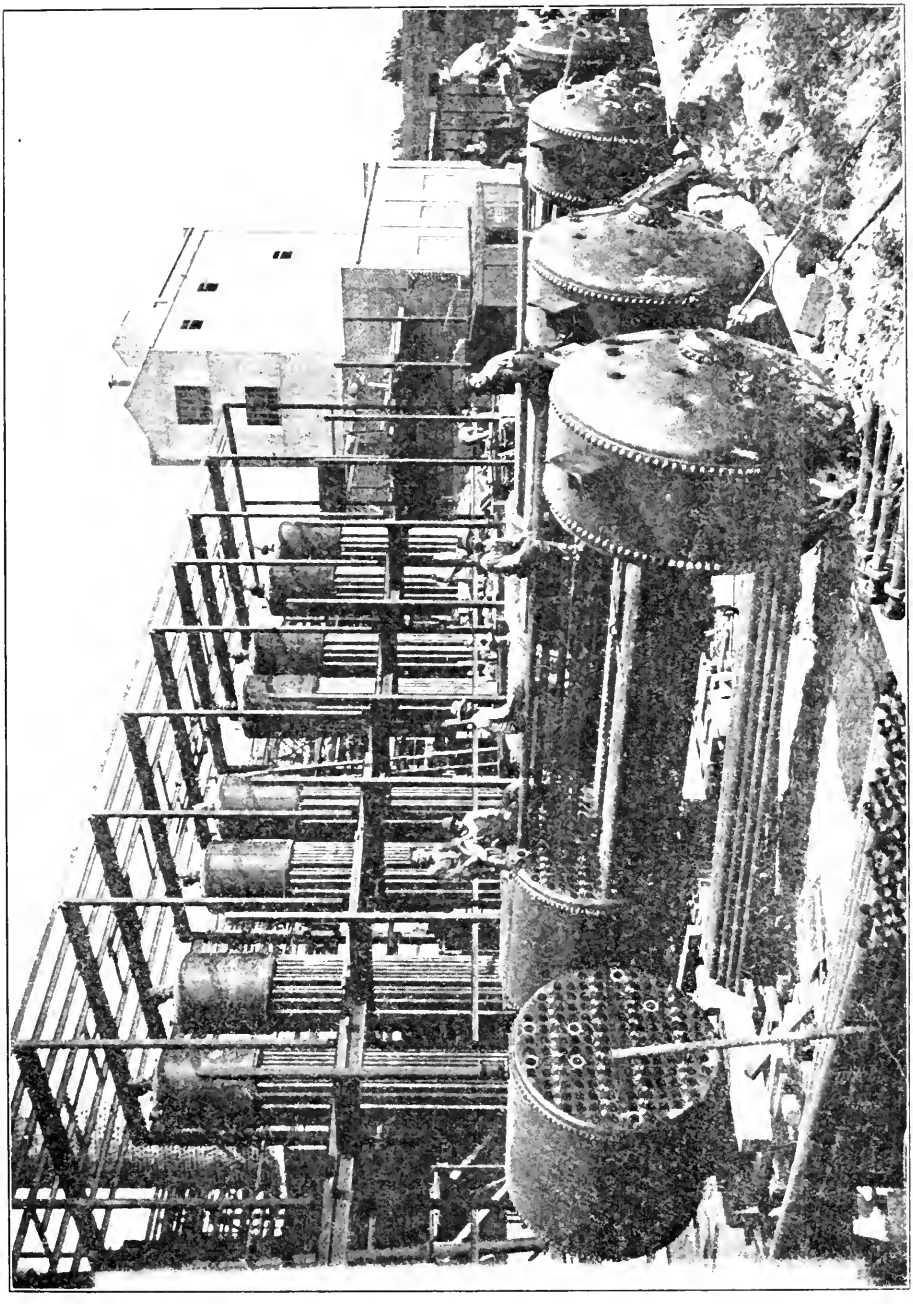
There are many boilers in our Province in a condition similar to the one illustrated herewith, and I venture to say that these boilers are not annually inspected by Boiler Inspectors.

The reproduction shown on page 61 illustrates one of the several very large steam plants under erection in our Province. The boilers are twelve in number, and are capable of developing about 4,000 h.p., and are of the Wicks Water Tube type, built in Saginaw, Mich., U.S.A., from designs approved and registered by the Steam Boiler Branch. These boilers were inspected during construction in compliance with the Act by the Hartford Steam Boiler Inspection & Insurance Company, and were shipped knocked down to the owners, the Dominion Sugar Co., Ltd., Chatham, Ont. Inspection reports on this work were received by us from the Insurance Company's Inspector in conformity with our regulations, and the boilers were finally examined and tested by one of our Inspectors after being erected on the site.

The steam piping for this installation was quite an important item, and the engineers who were doing the work ordered the material before submitting the piping arrangement for approval. When the drawings were surveyed, we found they were not entirely satisfactory, and several changes had to be made before approval and registration could be given.

I regret to report that the following explosions have been brought to our notice:—

On the 6th December, 1915, there occurred a fatal stop valve explosion in the plant of W. & J. G. Greey, Toronto, resulting in the death of four men. We made a complete analysis of this accident, and concluded that the cause was water hammer and defective cap screws in the stop valve cover. The steam installation consisted of two H.R.T. boilers, 60-in. diameter, which were at one time used for driving a Corliss engine of about 50h.p. The steam supplying power to the engine was conducted from the boiler stop valves through a 5-in. steam main which extended a distance of twenty-five feet in a horizontal plane, and then dropped vertically a distance of ten feet, at which end it was coupled to the engine stop valve which exploded. For some time the use of the engine had been discontinued and the boilers were used only for heating the plant at 80 lbs. pressure, but by reason of the old piping not being altered, the steam line to the engine was always open. It is probable, therefore, that the vertical leg of piping from the stop valve became filled with water due to condensation, and the horizontal length of piping became partly filled with water. What actually happened immediately preceding



the explosion was not proven, as the statement of the engineer in charge was not very clear, and the evidence of the witnesses was conflicting. The steam was shut off from the boilers at night and opened in the morning, and as far as we could learn, steam had been turned on in the early morning in order to heat the works, and some time later without warning the explosion occurred. We believe the admission of the steam into the horizontal length of piping leading to the engine had produced a rapid condensation and surging of the water lodging in the pipe, causing a heavy water hammer, the shock of which was transmitted to the water in the vertical leg of piping, and the engine valve cover being the weakest point in the pipe line was carried away from the cap screws. The full pressure of the boilers immediately thereafter was discharged through the valve cover opening, trapping the four men who were in the engine room at the time. The explosion was so sudden that the men had no time to escape and were scalded to death.

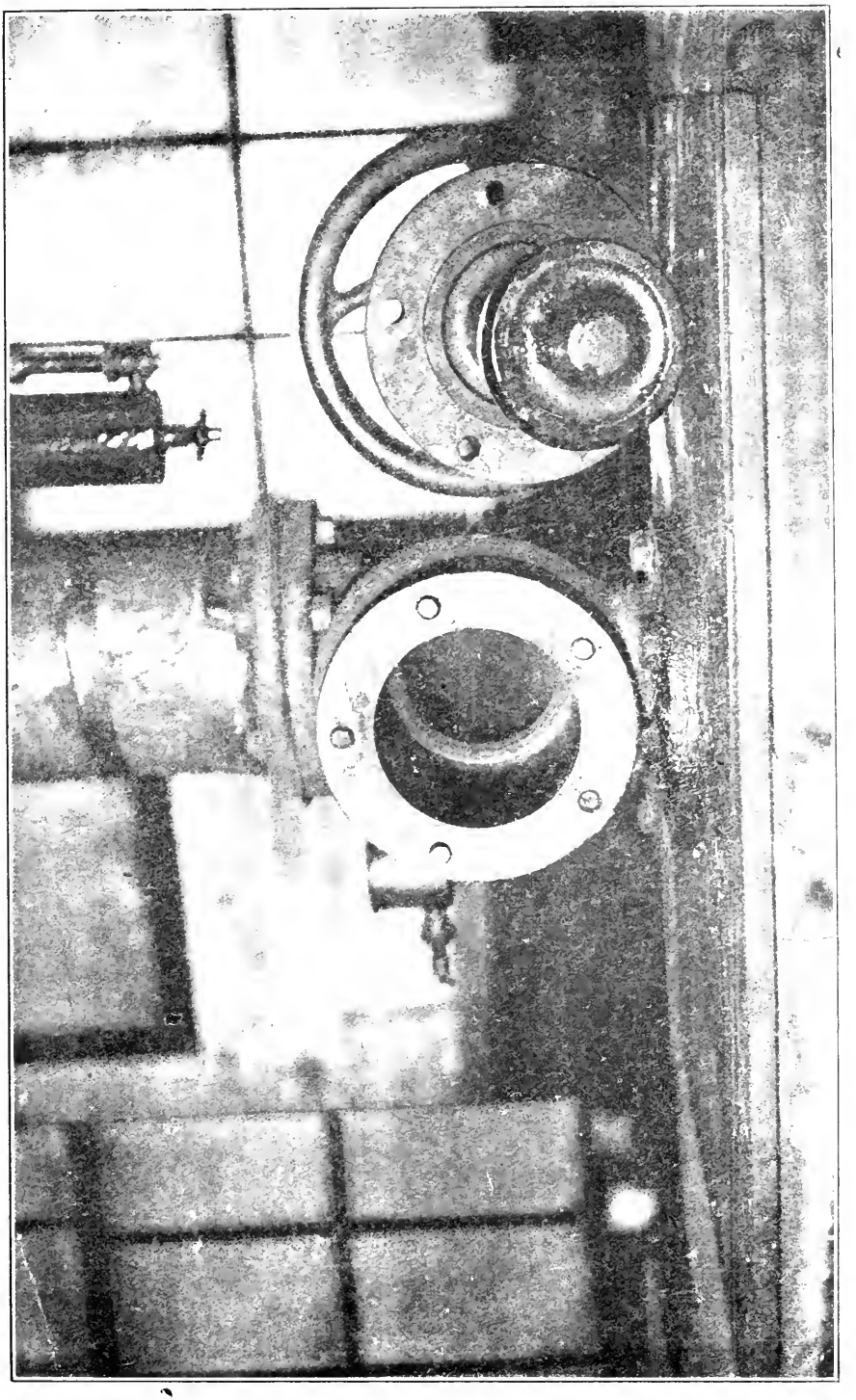
Two of the cap screws which secured the engine stop valve cover were found to be very defective, as may be observed from the illustration on page 63. The valve in the memory of any of the persons in charge of the plant, had never been taken adrift for inspection or repair, and the general condition of the entire steam plant was very unsatisfactory and badly in need of repair and re-arrangement. An annual inspection by a competent Boiler Inspector vested with the proper authority to order repairs in the interest of public safety would, I firmly believe, have prevented the explosion and saved the lives of four men.

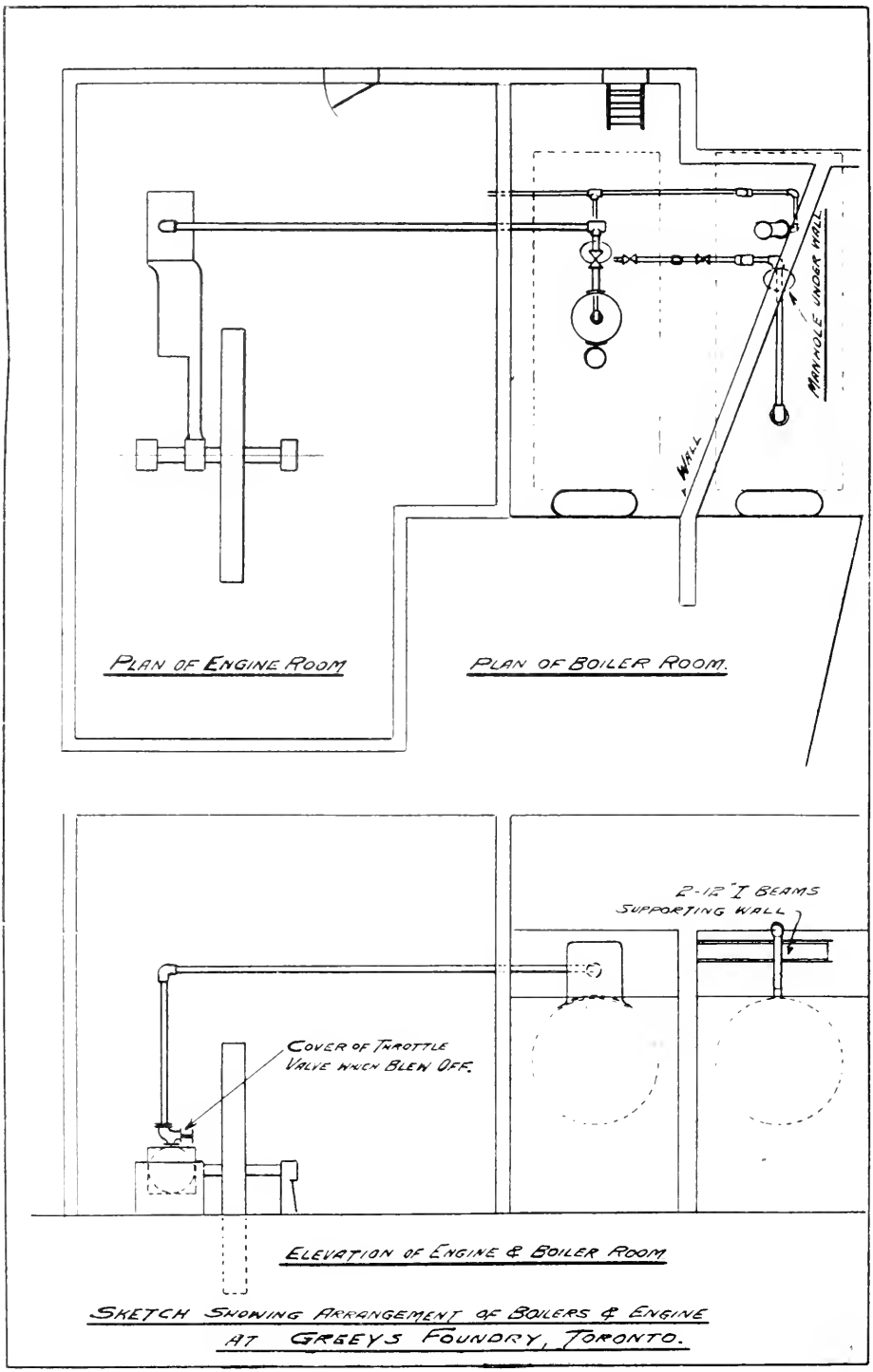
On the 25th January, 1916, a 48-in. x 14-ft. 0-in. H.R.T. boiler exploded at the Princess Laundry. The property damage was not serious, although the damage to the boiler was such as to warrant its replacement. Fortunately the fireman in charge escaped without being scalded by the escaping steam.

When feed water contains scale forming matter it will, unless removed by suitable means, accumulate in the boiler, and this accumulation was the cause of the explosion. The furnace plates by reason of a heavy deposit of scale and sludge adhering to them became overheated, and bulged to the extent of four inches deep on an area of about twelve inches in diameter. The furnace sheet after bulging ruptured, and the contents of the boiler were discharged at 100 lbs. pressure through the torn plate. The boiler had not been attended to, and if the scale and deposit had been frequently cleaned out, this accident would not have occurred.

On May 6th, a boiler exploded at the Kinleith Paper Company's plant in St. Catharines, severely scalding the fireman who was in charge of the boiler at this time. The cause of the accident was due to the accumulation of scale and sediment on the furnace sheet, which became overheated and bulged to the extent of 4½ inches deep, covering an area eleven inches in diameter. The damaged plate after bulging subsequently ruptured, making an aperture of about twelve square inches, and as the pressure on the boiler was 80 lbs per square inch, the water and steam were ejected with considerable force. The fireman was unfortunate enough to be in front of the firedoor when the boiler gave out and narrowly escaped with his life, he being severely scalded.

The exploded boiler was set in battery with two other boilers of similar dimensions, and which at the time of our inspection were beginning to show signs of failure by bulging in a similar manner to the damaged one. All these boilers were internally in a very dirty condition with loose scale and sediment adhering





SKETCH SHOWING ARRANGEMENT OF BOILERS & ENGINE AT GREEYS FOUNDRY, TORONTO.

to the plates, and had not received the attention necessary for the safe operation of a steam plant.

I personally made a special inspection, and advised installing an additional boiler, so that they would have sufficient capacity to close one boiler down at a time and thoroughly examine and clean it. Our recommendations have been carried out, and we do not anticipate any further trouble of this nature.

On the 22nd July, we were called upon to make an urgent inspection of three 72-in. x 18-ft. 0-in. horizontal return tubular boilers at the Western Salt Co., Ltd., Courtright, Ont. On examination, we found the fire sheets of the three boilers had bulged to such an extent as to render them in a very dangerous condition; one of the boilers especially was extremely bad.

The circumstances which brought about the bulges are as follows:—

The exhaust steam from non-condensing engines used in conjunction with the boilers—three in battery—was discharged, after passing through heating coils, into a hot well, then pumped without filtration back into the boilers, and consequently a considerable quantity of the oil used for lubrication in the engines was carried into the boilers with the feed water. This oil after combining more or less with the sediment in the water, formed a greasy deposit which settled on the heating surface and prevented the water from coming in contact with the plates, besides forming an excellent non-conductor to the transmission of heat, the result being that the plates became overheated and bulged.

PHOTOGRAPH NO. ONE

Shows the deformation of the bottom shell plates. The bulge extended halfway round the circumference of the boiler, and measured twenty-two inches in depth at its extremity; the plates had stretched circumferentially 2 ft. 6 in.

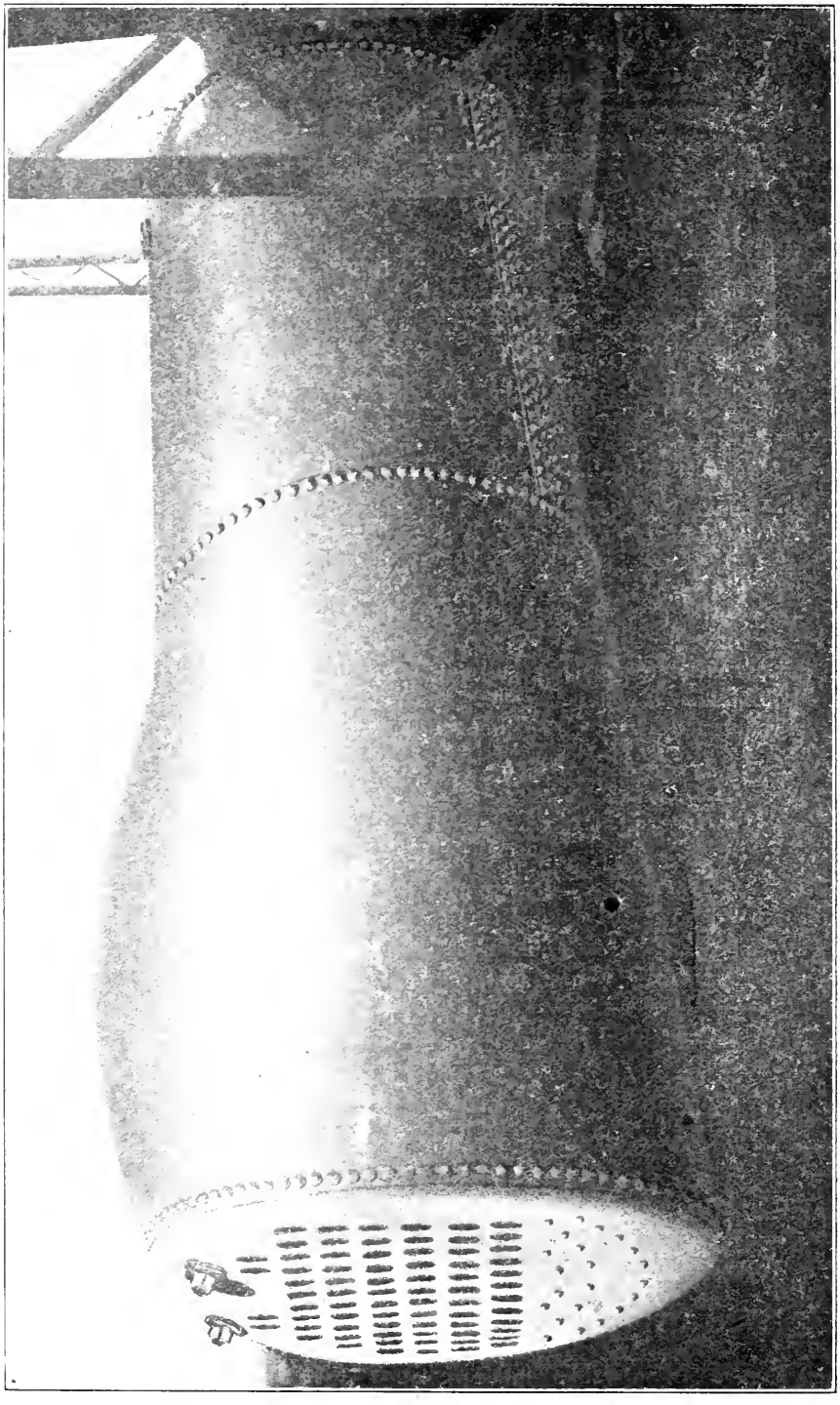
PHOTOGRAPH NO. TWO

was taken through the manhole opening below the tubes on the front head, and shows how the through stays bent when subjected to compressive stress due to the boiler head around the manhole being pulled in when the shell plates bulged outwards. The inside lap of the girth seam at this point was about one inch clear of the bottom shell plates, and the head was distorted about seven inches from a straight line.

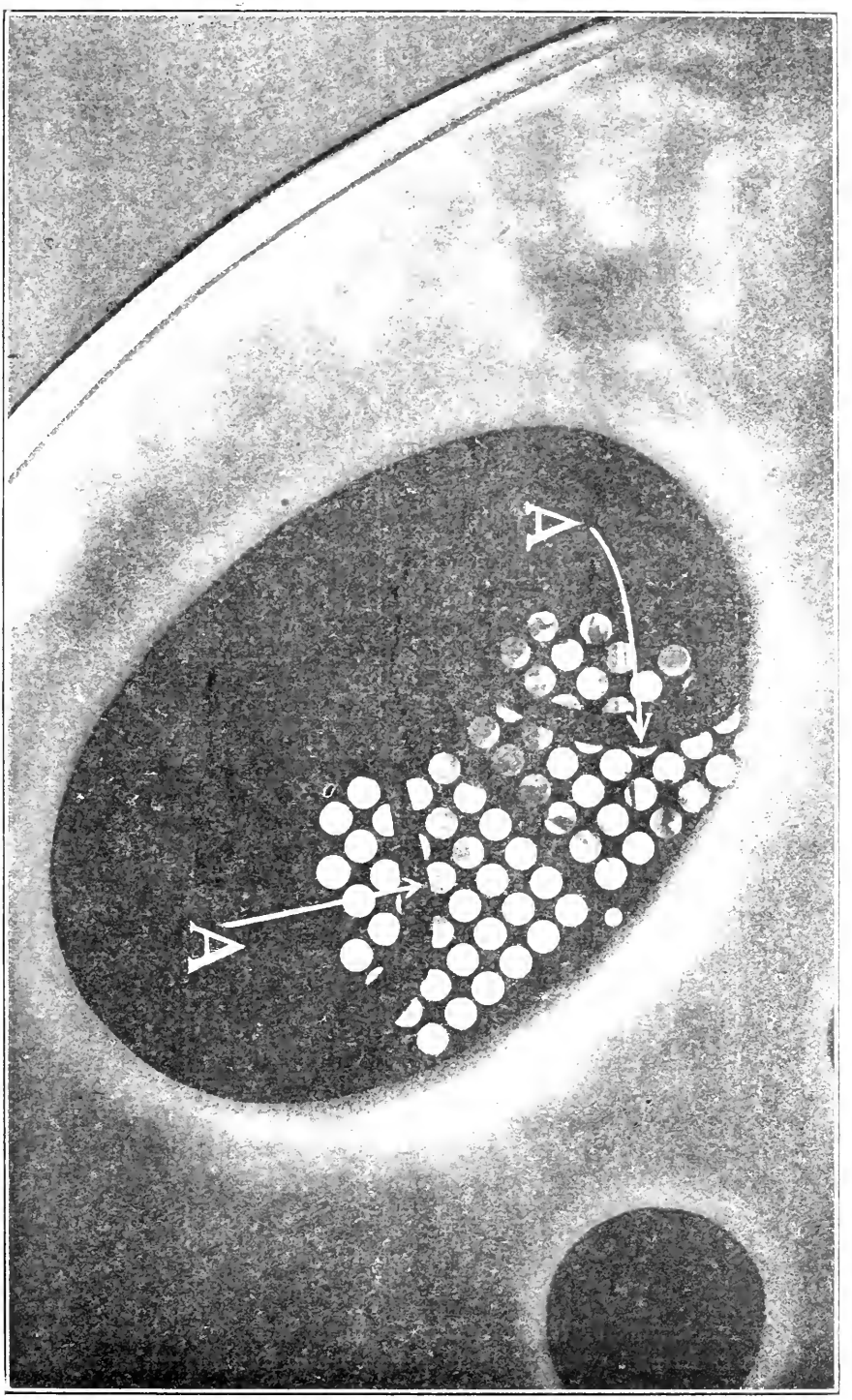
It was fortunate the bulged plates remained intact, for the thickness of the metal was so extenuated in the formation of the "bag" that if the plates had ruptured, I fully believe nothing would have saved a very disastrous explosion.

This accident serves to show that the material—which was a well-known brand of steel—was of very excellent quality, and also points out the perfection which steel manufacturers have attained in the manufacture of this product.

On the 16th September we were called upon to make an inspection of a boiler at the plant of the Alvinston Power Co., Ltd., Alvinston, Ont., which had given out under pressure. The boiler was a Horizontal Return Tubular one,



Photograph No. 1.



Photograph No. 2.

60 in. in diameter, and fitted with a 30-in. dome. On examination, we found a serious crack, 6 in. long, had developed close to the flange of the dome head, while on the inside of the dome around the flange there were a number of smaller cracks and fissures. The stays supporting the dome head passed through the neutral sheet, and the nuts securing the lower ends of these stays had become loose and had dropped off entirely, leaving the heads without support, which resulted in the plate fracturing.

The owners were advised of the damage, and to immediately discontinue the use of the boiler until the defective dome head and the defective stays were replaced, which work was performed accordingly.

We fully believe a serious explosion was averted in this instance by our advice and careful examination. Prior to our inspection a working pressure of 120 lbs. had been carried, but the maximum working pressure determined safe by our inspector was 90 lbs., for which we issued the official certificate.

On the 13th October, 1916, we inspected at Prescott a boiler owned by the George Hall Coal Co., which exploded a week or so prior to this date. The boiler was of the H.R.T. type, 72 in. in diameter by 15 ft. 0 in. long, with shell plates 7-16-in. thick, and was operated before the accident at 125 lbs. The explosion was caused by the overheating of the shell plates due to shortage of water. It appears that during the night after the plant had been shut down, the blow-off valve of this boiler had leaked. The cause of the leakage was not ascertained, but it is probable the valve was left open being choked with mud temporarily. The following morning, the fireman broke up his fires as usual preparatory to raising steam, when the boiler exploded. Fortunately the steam pressure was low, and there was very little water in the boiler at this time or the consequences would indeed have been serious. As it was, the first sheet bulged to the extent of 3 in. to 4 in., and the distortion extended the full length of the plate and about one-third of the shell circumferentially. The fractured opening in the plates was 13 in. long by 1¼ in. wide.

The repairs, which consisted of entirely new shell plates, were made by the FitzGibbon Boiler Works, Ltd., Ogdensburg, N.Y.

We were not notified about this work until after the repairs had been made and the boiler ready for resetting, but had we been notified according to section 4, page 8 of our regulations, we would have seen that the reconstruction of the boiler conformed with the requirements set forth in our regulations, and in keeping with modern boiler practice. This work was not executed in the most approved fashion, but as the repairs were almost finished before we were consulted, it was too late to suggest any alterations.

The announcements of the foregoing accidents were communicated to us in indirect ways as in past years, as there is nothing in our Act which requires the owner of a boiler to notify this Branch in the event of an explosion, so that there may have been other explosions which were not brought to our knowledge.

The personnel of the service at present consists of six inspectors, the Chief Inspector, one Clerk and Stenographer, and one Stenographer.

In concluding my report, I desire to express my appreciation for the support given to me my Superiors in Office in connection with enforcing the provisions of the Steam Boilers Act, also to the entire staff of the Steam Boiler Branch for their co-operation in carrying out the work of inspection and surveying of designs.

I trust that my efforts have been in accordance with the policy of the Department.

I have the honour to be, Sir,

Your obedient servant,

D. M. MEDCALF,

Chief Inspector of Steam Boilers.

REPORT OF THE SUPERINTENDENT OF COLONIZATION ROADS.

The Honourable F. G. Macdiarmid,

Minister of Public Works and Highways, Ontario.

Sir,—I have the honour to submit to you the Annual Report of work done by the Colonization Roads Branch of the Department of Public Works for the fiscal year ending October 31st, 1916.

Labour was very scarce in many localities this year, and wages were high owing to war conditions, with the result that our appropriations in many cases were not sufficient under these conditions to do all the work they were intended to do. The season was also a very trying one, being for long periods either excessively wet or else extremely hot and dry, conditions which make road construction very difficult.

In spite of all these difficulties, the work on the whole has been eminently satisfactory. Our Inspectors and Overseers have been very conscientious and painstaking, and with few exceptions have done all that could be done, considering the means at their disposal.

The total expenditure for the year was $253,539.11, the details of which are shown on the accompanying statement of the Accountant of the Branch. Of this amount $70,837.12 was paid to Municipalities for work done under By-laws, passed in conformance with the Colonization Roads Act. Of the balance of the expenditure, $151,705.46 was spent directly by the Branch, through Overseers appointed for that purpose, and the remainder, $30,996.53 for inspection and miscellaneous items. No single work of any great extent was undertaken during the year on account of the war. The following is a summary of the work performed:

	New Road	Old Road
By-Laws		
Roads	48.1 miles	701.6 miles
Culverts	111	569
Bridges	3	67
Direct Grants		
Roads	94.9 miles	471.5 miles
Culvert	219	689
Bridges	38	51

All of which is respectfully submitted.

I have the honour to be,

Sir,

Your obedient servant,

C. H. Fullerton,

Superintendent Colonization Roads.

Dated at Toronto, October 31st, 1916.

NORTH DIVISION.

Allan Township, 10th Concession.—The road across lots 25, 26 and 27 was improved by gravelling 128 rods and brushing out the sides.

Allan (Unorganized part).—The 10th sideroad between Cons. 4 and 6 was repaired by grading and gravelling 165 rods. The 4th Con., across lots 6 to 12, was improved by grading 1 mile 166 rods, gravelling 50 rods and putting in 3 wooden culverts.

Assiginack Township Roads.—The road on Con. 1, across lots 4 and 5, was improved by grading 50 rods and surfacing 110 rods with gravel. The road on Con. 2, across lot 1, was gravelled a distance of 80 rods. The Government Road from Manitowaning to Manitou Lake, across lots 50 and 51, was improved by grading 60 rods and gravelling 96 rods. The Manitowaning and South Bay Road was improved by grading 80 rods and surfacing with gravel 100 rods. The Government Road from Manitowaning to Manitou Lake, lots 48 and 49, was surfaced with gravel a distance of 116 rods. The South Bay Road, lots 27 and 28, was surfaced with gravel 108 rods.

Assiginack Township, Lot 6, Con. 14.—The road known as the Slash Road was improved by side-brushing 33 rods, grading 30 rods and spreading gravel on 15 rods.

Aubrey Township Roads.—Three miles of old road were improved by being stumped and grubbed, 2½ miles of which were graded and surfaced with clay and gravel, 2 miles ditched, 130 rods corduroyed and covered with clay and gravel, 2 bad hills cut down and reduced and the earth filled in low places; 6 wooden culverts were placed and 1 wooden bridge having a span of 22 ft. was constructed. Considerable delay was caused on this work owing to the scarcity of men, nevertheless, the work has been done particularly well by the settlers.

Aweres and Pennefather Townships, Goulais Bay to Heyden.—Two miles of new road were opened up by being cleared 30 ft. wide, stumped and grubbed 20 ft. wide and grading 1½ miles. On this road a hill cut and fill of 395 cu. yds. was made, 40 rods corduroyed, 4 wooden culverts placed and 4 wooden bridges having an average span of 22 ft. and 15 ft. wide were built.

Awrey Township Roads.—One mile of new road on Con. 6, across lots 1 and 2, was cleared and underbrushed 40 ft. wide, 160 rods were stumped and graded, 1 mile ditched, 5 wooden culverts placed and 2 wooden bridges having a span of 16 ft. constructed.

Balfour Township Roads.—The road on Con. 5, lot 12, was repaired by side-brushing and grading 80 rods. A washout occurred at this place last spring and earth had to be hauled to fill it up.

Barrie Island, Lots 16 and 17, Con. 5.—This road was improved by grading and gravelling 140 rods, putting in 1 cedar culvert and making a fill of 150 yds. of stone and 300 yds. of clay.

Barrie Island Road, McKeown's Hill to Bridge.—This road was improved on lot 28, Con. 8, by grading and gravelling 55 rods.

Basswood Lake Road, East End.—Four miles of old road commencing at lot 1, Day, and rounding the Lake to lot 10 in Gladstone, were improved by grading and gravelling 1½ miles, the balance of 2½ miles were general repairing, making these 4 miles in very good shape.

Bidwell Township, 10th Concession, Lots 20 to 25.—The road known as the Green Bay Road was improved by surfacing 50 rods with gravel and making a clay fill of 120 cu. yds.

Bidwell and Billings Townline, Cons. 2 to 4.—A piece of new road 24 rods in length was cleared, stumped and gravelled and a fill of 300 yds. of stone and 60 yds. of earth made.

Billings Township Roads.—Billings and Allan townline, Cons. 8 to 10, was improved by grading 1¼ miles, gravelling 70 rods and fixing culverts. On lots 12 and 13, 85 rods were graded and gravelled. The Kagawong and Providence Bay Road, Cons. 1 and 2, lot 23, was improved by constructing a new road 108 rods in length. The 20th sideroad between Cons. 8 and 12 was improved by grading 290 rods and gravelling 100 rods. The 25th sideroad between Cons. 16 and 18 was improved a distance of 38 rods by repairing 2 culverts, making a cut and fill of 200 yds. of stone and earth and putting a guard rail on it. This piece of road was also gravelled 28 rods.

Blezard Township Roads.—The road on the 6th Con. from lot 2 to lot 7 was improved by grading 2 miles, ditching ¾ miles, building 3 wooden culverts and 1 bridge having a span of 16 ft.

Bright Township, Con. 4.—The road across lots 9, 10, 11 and 12 was improved by grading 1 mile, gravelling 104 rods, putting in 5 small culverts and by general repairing on the other mile by clearing out stone, filling holes and fixing culverts.

Broder Township Roads.—The road on lots 11 and 12, Con. 5, was opened up by clearing, stumping and grubbing 1 mile, 50 ft. wide and putting in 1 wooden culvert. A new road ½ mile in length was opened up between lots 2 and 3, on Con. 5. The Macfarlane Road was improved by grading and ditching 1 mile and putting in 2 wooden culverts. The Kelly Lake Road was improved a distance of 2¼ miles by being graded and ditched. 12 wooden culverts were put in and 80 rods of new road were opened up.

Campbell Township, 2nd Concession.—This road was gravelled 200 rods across lots 17, 18 and 19.

Campbell Township, 10th Concession, 20th to 25th Sideroad.—On this road 112 rods were graded and gravelled, 90 rods of which were side-brushed and cleared, 1 plank culvert was put in and a fill consisting of 35 yds. of clay and 75 yds. of stone was made.

Campbell and Mills Townline.—This road was improved across Cons. 1 and 2 by side-brushing 100 rods and surfacing with gravel 120 rods.

Campbell Township, 10th Concession.—One-half mile of old road commencing at lot 14 was surfaced with gravel, 75 rods of it being graded.

Campbell Township, 12th Concession.—The road on lots 12, 13 and 14 was improved by grading and gravelling 130 rods.

Campbell Township, 8th Concession, Head's Corner.—This road was improved by grading 62 rods, gravelling 90 rods and putting in 1 cedar culvert.

Campbell Township, Perivale Road.—This road on the 4th Con., lots 9 to 12 inclusive, was improved by surfacing 180 rods with gravel and cleaning out the sides.

Campbell Township, Griffith's to Head's.—The road across lots 27 and 28, Con. 8, was surfaced with gravel 85 rods.

Capreol Township Roads.—The road on Con. 2, lots 8 to 12, was improved by grading 2 miles, ditching 1½ miles and building 2 wooden culverts. The road on lots 9 and 10, Con. 3, was graded a distance of 1 mile, a hill being lowered 21½ ft. and panelled to prevent the wind from drawing away the sand.

Carnarvon Township, 2nd Concession.—The road on lots 24 and 25 was improved by grading 34 rods and gravelling 96 rods.

Chapleau Township Roads.—The Loon Lake Mill Road was improved by grading 2 miles, ditching ½ mile and putting in 4 wooden culverts.

Cockburn Island Roads.—The road on lots 11 and 12, Con. 12, was improved by grading and gravelling 60 rods and making a stone fill of 150 cu. yds.

Cuthbertson Location, Con. 7.—A new road ¾ miles in length, lots 5, 6 and 7, was opened up by stumping and grubbing ½ mile, ditching 40 rods, building 2 cedar culverts and making a cut and fill of 600 cu. yds.

Cuthbertson Road North from C.P.R. Tracks to Con. 7.—One-half mile of old road through a very stony, rough tract of land was put in good shape by being graded and gravelled.

Dawson Road Township Roads.—From lots 33 to 38, Cons. 1 and 2, 1 mile of new road was cleared, stumped and grubbed, making a wagon trail to let out four settlers. Finnmark to Dawson Road, lot 30, Con. 1, was opened up by clearing, stumping and grubbing 1 mile through a red clay country, ½ mile of this road was graded and surfaced with earth, 3 jack pine culverts and 1 jack pine bridge were constructed.

Day Township Roads.—One mile of old road was improved across lots 4 and 5, Con. 2, by grading ¾ miles, gravelling 200 rods and building 2 wooden culverts.

Dill Township Roads.—The boundary between Dill and Broder, across Cons. 5 and 6, was improved by grading 2 miles and putting in 3 wooden culverts.

Dorion Township Roads.—In this township the Wolf River Road was cleared, stumped and grubbed and made in passable condition ½ mile across lots 12 and 13, Con. 3. A hill 25 rods in length was cut down on lot 10, Con. 5, and 50 yds. of earth were removed from a clay hill. The Centre Road between Cons. 4 and 5, from lots 3 to 13, was improved 2 miles by being graded and surfaced with earth and putting in 6 wooden culverts. General repairs were also made on 7 miles, 300 yds. of clay being removed from 4 hills.

Eton Township Roads.—A new road ¾ miles in length was opened up by clearing, stumping, grading and gravelling ½ mile and cutting down a hill and making a fill at the bottom. Sixty rods of old road were repaired by ditching, grading and gravelling and putting in 1 wooden culvert. The work in this township was between lots 6 and 7, Con. 4, and across lots 2 and 3, Con. 2.

Fairbanks Township Roads.—A road 1 mile in length was opened up from Vermillion Lake to the boundary of Fairbanks and Dowling by being cleared, stumped and graded, putting in 3 wooden culverts and ditching ¾ miles.

Falconbridge and Garson Boundary Road.—One and one-half miles of new road were cleared, stumped and ditched and 2 wooden culverts constructed.

Garson Township Roads.—The work in this township consisted of side-brushing and grading 9 miles and building 2 wooden culverts.

Gillies Township Roads.—On the Centre Road ½ mile was graded and ditched, 25 rods gravelled and 3 wooden culverts put in. This road was also extended ½ mile by being stumped, graded and surfaced with gravel and putting in 7 plank and concrete culverts. Six miles of general repairs were made on old roads. The Silver Mountain Road was improved by grading and surfacing with earth 1 mile and constructing 11 culverts.

Gladstone and Patton Boundary.—A new road crossing lots 2 and 3, Con. 2, Patton, was opened up by cutting ½ mile through heavy hardwood timber and 1 mile through old burnt ground with heavy growth of brush.

Gordon and Allan Municipality Roads.—Gore Bay to Long Bay Road was graded and surfaced with gravel 104 rods, 38 rods of ditch were cleaned and an earth fill of 75 yds. made. Range A Road was improved by grading and gravel-

ling 100 rods, ditching 40 rods and building 1 rock culvert. Con. 7 Road, lots 12 to 16, was improved by grading 1¼ miles and gravelling 56 rods. The road between lots 21 and 22, Cons. 4 to 6, was cleared 1¼ miles and graded 270 rods. The Government Road, lot 9, Cons. 4 and 5, was improved by grading 270 rods, surfacing with earth 57 rods, with gravel 201 rods and side-brushing 40 rods. The Government Road west to the 16th sideroad was improved by grading 200 rods, gravelling 140 rods and making a clay fill of 15 cu. yds. The road from Con. 10 east was improved a distance of 63 rods by stumping and grubbing 40 rods, 8 ft. on each side, and building 1 wooden culvert. Ninety rods of old road on lots 26 and 27, Con. 11, were graded, 10 rods gravelled and ditched.

Gordon Lake and Rock Lake Road.—The road across lots 1, 2 and 3, Rankin Survey, Aberdeen Township, was improved by grading 1 mile 120 rods and gravelling 1 mile 30 rods.

Gorham Township Roads.—In this township the road between Cons. 1 and 2, across lots 11 and 12, was improved a distance of ¾ miles by stumping and grubbing ¾ miles, grading, surfacing with earth and ditching ½ mile, and building 4 cedar culverts. The townline of Gorham and McIntyre was opened up ½ mile by clearing, stumping, grading and surfacing with earth ¼ mile and putting in 3 culverts, and repairing ½ mile by grading and surfacing with earth ¼ mile across lots 10 and 11. The Gorham and Ware boundary was improved ½ mile by stumping and grubbing ½ mile, grading and surfacing with earth ¼ mile, ditching 200 rods and building 1 tamarack culvert. The road between lots 6 and 7, across Cons. 1 and 2, was improved by grading and surfacing with earth 1¾ miles, building 2 wooden culverts and cutting down a hill, removing 200 yds. of earth.

Hagar Township Roads.—Two miles of old road were graded crossing lots 12 and 13, Cons. 4 and 5. One mile of new road across Con. 5, between lots 8 and 9, was opened up 66 ft. wide by being cleared, stumped and grubbed. One-half mile from lots 3 to 6 inclusive, was graded and ditched on both sides and 2 wooden bridges, span 16 ft., constructed. The road across lots 13 and 14, between Cons. 5 and 6, was graded 1 mile, ditched ½ mile and had 1 wooden bridge constructed on it. One-half mile of old road, across lot 11, Cons. 4 and 5, was graded and 240 rods ditched. Commencing at lot 8, between Cons. 4 and 5, ¾ miles of old road were graded 16 ft. wide. Between lots 3 and 4, across Con. 4, ½ mile of old road was graded and ditched and 2 wooden culverts built. On Con. 3, lot 13, ¼ mile of old road was graded. A new road 1 mile in length was graded across lots 12, 13 and 14, Cons. 1 and 2, 1 wooden culvert and 1½ miles of ditching being constructed. Across Con. 2, between lots 12 and 13, 1 mile of old road was graded and 4 culverts put in.

Hallam Township Roads.—Commencing at Con. 1, between lots 2 and 3, 1¼ miles of old road were improved by removing stones and stumps, grading 1 mile and gravelling 280 rods.

Hammer Township Roads.—Between lots 7 and 8, across Con. 5, 1 mile of new road was cleared, stumped and ditched and ½ mile of it graded.

Harrow Township Roads.—The road on lot 8, Con. 2, was improved a distance of 20 rods by putting in 2 Pedlar culverts and cutting a gravel hill, and filling over the culverts 1,456 cu. yds.

Hartman Township Roads.—The work in this township commenced on lot 11, Con. 5, and lot 9, Con. 10, ½ mile of new road being cleared, stumped, graded, gravelled and ditched, and 3 wooden culverts built, also 1½ miles of old road were repaired by being side-brushed, graded and gravelled and putting in 4 wooden culverts, 1 wooden bridge and 13 rods of corduroy.

Hawley Township, Road from Lake Nepowasa to and through the Township of Hagar to Markstay.—Three miles of new road were constructed by being cleared 60 ft. wide. Three-quarters of a mile of this was stumped, graded and ditched. Six wooden culverts were put in.

Hilton Township, Cons. Q and R.—Two miles of old road from lots 19 to 26 were improved by clearing, stumping and grading 40 rods, surfacing with gravel 1 mile and building 1 wooden culvert.

Howland Township, 9th Concession to old Government Road.—One hundred and eighty rods were graded, 52 rods gravelled and 1 culvert repaired.

Howland Township, Moses Burnett's Hill on Townline.—Eight rods of old road were improved by making a fill of 180 yds. of rock and 25 yds. of clay, and putting 150 ft. of guard rail on each side of the fill. This rock was blasted out and cut on the hill.

Howland Township, 11th Sideroad, 9th Concession to Main Road.—This road was improved by grading and gravelling 152 rods and putting in 1 cedar culvert.

Ignace Township Roads.—The Ignace and Osequan Colonization Road was improved by side-brushing, grading and gravelling 1½ miles, building 3 culverts and 2 bridges. Bridge No. 1, 20 ft. long, 16 ft. wide, 8 ft. high, was covered with 3-in. tamarack and built of heavy square timber, the approaches filled in with gravel and cinders. Bridge No. 2, 30 ft. long, 16 ft. wide, was built of tamarack.

Iron River Road.—Three-quarter miles of new road were opened up on section 3, McDonald, by grading 225 rods, gravelling 115 rods and putting in 5 wooden culverts.

Jocelyn Township, Con. O.—One-half mile of old road between lots 10 and 11 was improved by cutting sand hills, filling and putting 450 yds. of hardpan and 90 loads of stone on the sand, thus making a firm road.

Johnson Township, Con. 6.—Across lots 2, 3 and 4, ¾ miles of old road were improved by gravelling 200 rods, making a hill cut of 250 yds. and putting in 2 concrete and 1 cedar culverts.

Kagawong to Ice Lake.—This road on Con. 8, lots 5 to 15, Allan township, was improved by grading 1 mile 65 rods and gravelling 90 rods.

Kaministikwia Road.—Three miles of old road from lot 17, Con. 2, to lot 15, Con. 4, Ware township, were improved by being stumped and grubbed, placing 15 wooden culverts, corduroying 40 rods and making a side hill cut ½ mile long and 12 ft. wide.

Kirkwood Township Roads.—Desert Road, across lots 9 and 10, Con. 5, was improved by repairing a very bad hill, taking out boulders, grading 240 rods and ditching same, also cutting other hills and grading parts of the road and putting in 4 wooden culverts.

Laird Township, C.P.R. Station to Black Creek.—Gravel was spread on 140 rods of old road between sections 3 and 4.

Lefroy Township Roads.—The Ansonia Road, section 15, was improved by grading ½ mile and gravelling 140 rods.

Lorne Township Roads.—Lorne Power Road, lots 11 and 12, Con. 4, was improved by gravelling 90 rods and making an earth cut of 50 yds.

Louise Township Roads.—Rat Lake Road between lots 2 and 3, Cons. 4 to 6, was improved by grading 1 mile 102 rods, making a clay fill of 50 yds. and building 3 cedar culverts.

Lumsden Township Roads.—One mile of old road between lots 4 and 5, across Con. 1, was improved by being side-brushed, grading 80 rods and building 3 cedar

culverts. One mile of old road was graded across lots 3 and 4 on Lumsden and Rayside boundary.

Lybster Township Roads.—One-half mile of old road was graded and surfaced with earth on lot 4, Con. 5. One mile of old road from Nolalu, Marks township, was graded and surfaced with earth, 300 yds. of earth removed from a side hill and 6 wooden culverts put in. Morgan Siding Road was improved by grading and surfacing with earth 2½ miles, removing 200 yds. of earth and putting new plank on 8 culverts.

Machin Township Roads.—One mile of old road on lots 10 and 11 was improved by stumping, grading, gravelling and ditching 1½ mile, putting in 2 iron culverts 30 in. in diameter and corduroying 110 rods and covering it with clay and gravel.

Marks Township Roads.—Across lots 6 and 7, Con. 2, 1 mile of old road was graded and surfaced with earth, 4 wooden culverts put in and 200 yds. of earth removed from side hill cut. Between lots 2 and 3, Cons. 1 to 4, 1½ miles of old road were graded and surfaced with earth and 7 wooden culverts built. The road between lots 6 and 7 was graded and surfaced with earth ½ mile on Con. 2.

McKim Township, Road on the South Shore of Ramsay Lake.—A new road ½ mile in length was cleared, stumped and grubbed and 4 concrete culverts built.

McKinnon Township Roads.—The road on lots 11 and 12 and part of lot 1 in Harrow Township was graded 1½ miles over stony hills and along side of a rocky bluff.

Melgund Township Roads.—In this township 3 miles of old road were graded and gravelled, 4 wooden culverts placed and 1 wooden bridge having a span of 100 ft. was repaired by putting on new covering and stringers. One mile of new road was cleared and several bad hills cut down and filled in the low places. The cribs of the Wabigoon Bridge were repaired.

Merritt Township Roads.—The South Mill Road between Cons. 2 and 3, lot 11, was improved by stumping 213 rods, grading 150 rods and building 4 cedar culverts. This same road was improved a further distance of 2½ miles and had 3 cedar culverts put in on it at lot 9, Con. 3; lot 9, Con. 4, and lot 10, Con. 10.

Mills, 10th Sideroad, Cons. 6 to 8.—Sixty-eight rods of old road were gravelled, 24 rods of corduroy removed and a fill of 100 yds. of stone and earth made.

Mills Township, Road from School West.—Road was improved by gravelling 100 rods on lots 11, 14 and 15, between Cons. 6 and 7.

Morgan Township Roads.—On the line between lots 6 and 7, Con. 6, 55 rods to the bridge from the east and 105 rods from the bridge west were cleared, stumped and graded and 1 wooden culvert put in.

Mutrie Township Roads.—A new road ¾ miles in length was constructed, 6 wooden culverts and 4 wooden bridges built. One-half mile of old road was repaired by cutting down 2 bad hills, corduroying 60 rods and covering it with clay and gravel. The remainder of the half mile was graded and surfaced with gravel. One wooden culvert was put in.

Myers, West to Main Road.—Between lots 16 and 17, Con. 10, Sheguiandah township, was improved by grading 90 rods, gravelling 102 rods and making a stone fill of 20 yds.

Nairn Township Roads.—At lots 1 and 2, Con. 3, and lot 4, Cons. 4 and 5, improvements were made on 210 rods of old road by side-brushing 5 rods, grading 210 rods, gravelling 60 rods and making an earth fill of 40 cu. yds.

Neelonee Township Roads.—One and one-half miles of old road were graded on Con. 5, across lots 5, 6 and 7.

Newhouse to Providence Bay.—Road in Tehkummah township, lots 28 to 30, and Carnarvon township, lots 22 to 30, was improved by gravelling 280 rods.

Nipigon Township Roads.—Lot 13, Cons. 3 and 4, was improved by re-surfacing ¾ miles with gravel and putting in 2 jack pine culverts.

Parkinson and Mississauga Road.—Across lots 10 and 11, Con. 2, Parkinson Township, 1 mile of old road was improved by straightening ¼ mile and grading 1 mile, leaving the road in good shape.

Patton Township Roads.—Between lots 10 and 11, Cons. 4 and 5, a ditch 40 rods in length to Alma Creek was constructed to drain one-half mile of road. The half mile of road was graded and the ditch on each side cleaned out.

Pearson Township Roads.—On Con. 4, lots 6 to 9, ½ mile of old road was graded and surfaced with earth and ½ mile of new road cleared, stumped and grubbed and 4 wooden culverts put in. On Con. 2, lot 9, ½ mile through a swamp was graded, surfaced with earth and ditched. Between lots 11 and 12, Cons. 2 and 3, ¼ mile of old road was improved by being graded and surfaced with earth, putting in 1 culvert and removing 100 yds. of earth, filling in a bridge and clearing, stumping and grubbing ½ mile of new road.

Plummer Additional Road.—Section 6 was improved 1¼ miles by grading ¼ mile and gravelling 1 mile.

Poplar to Gore Bay.—In Mills township 170 rods were side-brushed and 140 rods graded. In Gordon township 110 rods were side-brushed and 88 rods gravelled.

Rock Lake to Cranston's Creek.—Plummer township, lots 1, 2 and 3, 1¼ miles of old road were improved by grading 200 rods, gravelling 125 rods, building 4 wooden culverts, putting clay on 2 sandy hills. There were 210 yds. of clay put on, making the hills good.

Rydal Bank Road, Northerly.—One-half mile of old road was improved by grading 8 rods, gravelling ½ mile and cleaning the ditches on lot 3, Con. 1, Plummer township.

St. Joseph Township, between Cons. I and K.—Between lots 10 and 11, ½ mile of old road was improved by gravelling 80 rods, taking out logs and roots which had been covered when the road was built 25 years ago, it being through a cedar swamp. One wooden culvert was put in.

St. Joseph Township, D Line.—Across lots 11 to 15 inclusive, 1¼ miles of old road were improved by side-brushing 80 rods, grading ¾ miles, gravelling 108 rods. The work was through a very stony, rough place and all the stone was removed from the road bed and the brush cut from the sides 16 ft.

Sandfield Township, Cons. 8 and 9, Lots 18 and 19.—One-quarter mile of old road was surfaced with gravel and 1 mile side-brushed.

Sandfield Township, Lot 11, Con. 10.—Gravel was spread on 182 rods of old road and 1 rock culvert put in.

Sandfield Township, 2nd Concession to Sandfield Mills.—Lots 7 and 8 were improved by side-brushing 74 rods 20 ft. on each side and gravelling 84 rods.

Sandford Township Roads.—One-half mile of old corduroy was covered with clay and gravel, and a culvert which was washed out was replaced by an iron culvert. A new road 1¾ miles in length was cleared, stumped and grubbed, 6 wooden culverts placed and ½ mile of this new road was graded and surfaced with clay and gravel.

Schreiber Township Roads.—Newman Lake Road was improved by surfacing 1½ miles with gravel and building 4 wooden culverts.

Scoble Township Roads.—Three miles of the Scoble Trunk Road were graded

and surfaced with earth and 1 culvert built. One-half mile of new road was cleared, stumped and grubbed and 1 wooden culvert put in on the 5th sideline. One mile on the Gillies and Scobie townline cut out a year ago was completed by being stumped, graded and surfaced, putting in 3 culverts, removing rock and cutting down a hill 100 yds.

Shakespeare Township, Centre Line.—One mile of new road was cleared, stumped and graded on Con. 4, lots 6 to 8, and a cut and fill of 1,000 yds. made.

Sheguiandah Township, 10th Concession, Front of Lot 20.—Gravel was spread on 65 rods of old road.

Sheguiandah Township, Dunlop Hill.—On the 12th Con. 200 yds. of rock were blasted out and along with 20 yds. of clay were put in a fill, thus improving 25 rods of road.

Sheguiandah Village to Reserve.—Road was improved by grading and gravelling ¼ mile, building 2 cedar culverts and making a fill 14 yds. earth and 50 yds. stone.

South Bay Mouth, Green's Road.—South of Con. 13, between lots 10 and 11, Tehkummah, 44 rods of old road were gravelled and a stone fill of 30 yds. made.

Southworth Township Roads.—Ten miles of old road were improved by brushing out both sides, grading ½ mile, gravelling ½ mile, building 3 wooden culverts, constructing 3 wooden bridges and placing 110 rods of corduroy and covering it. One-half mile of new road was cleared, stumped and surfaced with gravel, 2 wooden culverts built, 1 bridge repaired and 2 small offtake ditches dug.

Spanish-Walford Road, Section A.—Three miles of old road between the station at Spanish and the boundary of Victoria and Sheddon townships were improved by being graded with the grader, gravelling 1 mile and putting in 3 wooden culverts.

Sterling Township Roads.—From Hackett's Station east between lots A.L. 633 and E.T. 405, ¼ mile of new road was cleared, stumped and grubbed.

Strange Township Roads.—Lot 9, Con. 2, ½ mile of old road was graded and surfaced with earth, 40 rods stumped and grubbed and 12 wooden culverts put in. Between lots 4 and 5, Con. 5, ½ mile of new road was opened up by being cleared, stumped and grubbed and building 4 wooden culverts.

Striker Township, Ritchie's Hill.—A hill was cut down on lot 12, Con. 3, and 1,200 yds. of material were filled in at the bottom, thus improving 20 rods.

Striker Township Roads.—Lot 12, Con. 1, ¾ miles of old road were improved by grading 80 rods and gravelling 140 rods.

Sylvan Valley and Bar River Road.—General repairs were made over 1½ miles on section 34, McDonald Township, ½ mile being gravelled and 40 rods ditched.

Tarentorus and Aweres Townships, Island Lake Road.—One mile 20 rds. of old road were side-brushed, 56 rods gravelled and a fill 45 yds. rock and 320 yds. earth made.

Tehkummah Township, Lot 8, *Con.* 4.—A new road 124 rods in length was cleared, stumped and grubbed and 63 rods of it graded.

Tehkummah Township, 15th Sideroad, South of 4th Line.—One-quarter mile of new road was cleared, stumped and graded.

Tehkummah Township, 6th Line, Lots 11, 12 *and* 13.—A cedar bridge having a span of 25 ft. was built and 150 rods of new road cleared.

Tehkummah Township, Government Road, Lots 31 *and* 32.—Gravel was spread on 37 rods of old road and a stone fill of 150 yds., and 200 ft. of guard rail was made.

Tehkummah Township, 10th Sideline, 4th to 6th Line.—This road was improved by repairing 300 rods, gravelling 120 rods of it and building 1 cedar bridge.

Tehkummah Township, 2nd Line, 15th Sideline to 20th Line.—Work on this road consisted of side-clearing 200 rods, grading 46 rods, gravelling 214 rods and making an earth fill of 15 rods.

Tehkummah Township, Con. 6, from A and B to the 10th Sideroad.—Three-quarter miles of new road were cleared 30 ft. wide.

Tehkummah Township, Bennett's Hill to Black Rock.—Gravel was spread on 115 rods of old road, 30 rods were side-brushed and 15 rods ditched.

Temple Township Roads.—In this township the work was in Cons. 4, 5 and 6 and consisted of improving 1½ miles of old road and building ¾ miles of new road. On the old road 3 wooden culverts, 1 wooden bridge and ½ mile of corduroy were placed. The mile and one-half were graded and gravelled. The new road was cleared, stumped, graded and gravelled, partly ditched and had 3 wooden culverts placed on it.

Thessalon Township from Broughton's Corner.—A new road through green timber was cleared, stumped and levelled 97 rods, corduroyed 3 rods, ditched and had 4 wooden culverts built on it.

Thessalon Township, Section 26.—One mile of new road through green standing timber was cleared, stumped, grubbed and levelled for a winter road and 8 rods of corduroy placed.

Thompson Township Roads.—On section 16, north-west quarter, ½ mile of new road was cleared, partly stumped, graded and surfaced with gravel and had a cut and fill of 200 yds. made.

Tunnel Bridge Road.—Lots 1 to 5, Con. 6, Wells, was improved 2½ miles by grading 40 rods, gravelling 180 rods, filling a washout at a hill with 54 loads of stone and filling the old bridge on lot 5 with 80 loads of stone, and making small repairs on the remainder of the road.

Umbach Township Roads.—Two miles of old road were repaired by cutting down 2 sand hills, filling in sand and gravel in the low places, stumping and grubbing 2 miles, grading and surfacing with gravel 1½ miles, corduroying 40 rods and covering it with gravel, building 6 wooden culverts, ditching 1½ miles and spreading gravel on 40 rods of old corduroy.

Vankoughnet Township, Sections 21, 22 *and* 28.—A new road 1 mile 280 rods in length through level burnt land was partly constructed by clearing 173 rods, building 1 wooden culvert and 3 wooden bridges and making 3 cuts and fills totalling 1,179 yds.

Vankoughnet Township, Road to Serve Section 39.—Three-quarter miles of old road were improved by brushing and levelling 40 rods, grading 200 rods, building 1 cedar culvert and 1 cedar bridge, ditching 19 rods and making an earth cut and fill of 225 yds.

Vankoughnet Township, Section 20.—A new road 60 rods in length was cleared and graded and had 2 cedar culverts and 2 hill cuts and fills made on it. The old road, which was in a very bad state of repair, has been put in good shape for a distance of 1 mile 100 rods, 54 rods of gravel being spread, a rock fill of 65 yds. and an earth cut and fill of 89 yds. being made.

Victoria Township Roads.—Between section 38 and the Spanish River 40 rods of old road were repaired by cutting a hill 500 yds., blasting a drain out of rock to carry the water, which has always cut the centre out of the road, and grading at the top of the hill.

Wabigoon Township Roads.—A road 2½ miles in length was greatly improved by being stumped and grubbed, grading 1 mile, surfacing with gravel and clay 1 mile, building 6 wooden culverts and 1 wooden bridge, covering 110 rods of corduroy with clay and gravel and ditching 1 mile.

Wainwright Township Roads.—In this township 4½ miles of old road were side-brushed, graded and gravelled, 2 wooden culverts built, ditches blasted out and 70 rods of corduroy covered with clay.

Walford-Spanish Road, Section B.—On section 31, 1 mile of old road was graded and 80 rods gravelled in necessary places.

Ware Township Roads.—One mile of new road on the Gorham and Ware townline was opened up by being cleared, stumping and grubbing ½ mile, building 1 tamarack culvert and corduroying 40 rods. On the 2nd Con. ½ mile of new road was opened by being stumped and grubbed, ditching 43 rods, re-surfacing with earth 43 rods and putting in 2 cedar culverts. Also on the same con. 2 miles of old road were graded, gravelled and ditched and 6 cedar culverts put in.

Waters Township Roads.—Between lots 8 and 9, Con. 6, 1 mile of road was surfaced with earth. Between lots 6 and 7, Con. 4, south of the Government Road ¼ mile of new road was cleared, stumped and grubbed, 20 rods graded, 13 rods ditched and 1 wooden culvert built. The Government Road was graded 2 miles.

Waters Township (Nova Road).—One-half mile of new road on lot 4, Con. 2, was cleared, stumped, graded and ditched and 2 wooden culverts put in.

Wells Township Roads.—From lot 8, Con. 5, Wells, through Cons. 4 and 3, 3½ miles of old road were improved by grading 1 mile, gravelling 80 rods, repairing 8 old culverts and spreading 20 loads of stone in necessary places.

Zealand Township Roads.—On lots 19 and 20, Con. 6, the road was improved by stumping and grubbing 1½ miles, grading and gravelling ¾ miles, ditching 1 mile, corduroying ¼ mile, building 4 wooden culverts and 1 wooden bridge.

Repairs and Maintenance.

Burpee Township Roads.—Between Cons. 6 and 7, lots 25 and 26, 39 rods of old road were repaired by grading 30 rods, making a clay and stone fill 9 rods in length and putting in 1 cedar culvert. Between lots 30 and 31, Cons. 6 and 7, 60 rods of new road were cleared, stumped and grubbed, 1 cedar culvert built and 20 rods of corduroy covered with clay. Between Cons. 6 and 7, lots 30 and 31, 55 rods of old road were graded and gravelled and an earth fill of 22 yds. made. Burpee, Main Road, lots 23 to 25, Con. 8, ¾ miles of old road were graded and gravelled and 1 cedar culvert built. Con. 4, lots 30 to 35, 170 rods were side-brushed, 120 rods graded, 10 rods ditched and ½ mile surfaced with gravel. Lots 20 and 21, between Cons. 6 and 7, 16 rods were gravelled and a fill 50 yds. stone and 60 yds. earth made. Main Road, lot 32, between Cons. 7 and 8, was improved by grading 30 rods, gravelling 38 rods, ditching 38 rods, making a stone and earth fill of 100 yds. with 152 ft. of guard rail and building 1 rock culvert.

Burpee to Meldrum Bay.—In Dawson township, between Cons. 7 and 8, across lots 1, 2, 3 and 4, and lots 21, 22 and 23, 70 rods of old road were graded and surfaced with earth and 216 rods surfaced with gravel. A new road 216 rods in length was cleared and graded. Lots 1 to 15, Burpee, and lots 3 to 6, Robinson, were improved 4½ miles by grading 4 miles, gravelling 200 rods, making a stone fill of 13 yds. and putting in 4 cedar and 2 tile culverts.

Christlaw Road.—Lot 8, Con. 6, Wells, was improved by grading ½ mile and spreading gravel on 120 rods of it.

Indian Point Bridge.—Lots 23 and 24, Cons. 1 and 2, Gordon, was repaired with 780 ft. of 4-in. cedar plank 14 ft. long, and making a stone fill of 40 yds. and a gravel fill of 20 yds.

Kerr Road.—Four and one-half miles on this road in Vankoughnet township were improved by side-brushing 89 rods, grading 3½ miles, building 1 cedar culvert, repairing the covering on 1 bridge, making a tap ditch 15 rods in length, deepening an old ditch 21 rods, making a side hill cut of 69 yds., a hill cut and fill 50 yds. and covering 12 rods of corduroy with earth.

Laird and McDonald Road.—One-half mile of old road was surfaced with gravel on section 3, Laird.

Long Bay to Gore Bay.—Gravel was spread on 238 rods of old road along lot 1, Cons. 2, 3 and 4, Gordon Township.

Montgomery Bridge Road.—The work on this bridge was driving 28 piles in a space of 240 ft., putting in 120 loads of stone, 600 yds. of clay and surfacing with earth. The back of the piles are lined up with cedar piles and cedar. This bridge is located at the north-west corner of Galbraith township.

Nairn Township Road.—A fill of 625 yds. of earth was made on the Main Road.

Poulin Road.—Lot 9, Con. 6, Balfour, was improved by grading ¾ miles.

Robinson Township Roads.—From lots 39 to 45, Con. 12, 136 rods were gravelled and a stone fill of 10 yds. made. Between lots 21 and 22, Con. 10, 30 rods were gravelled and a fill consisting of 120 yds. of stone and 220 yds. of clay made. Between lots 20 and 21, Cons. 12 and 13, 74 rods were underbrushed and ditched and 50 rods graded and gravelled.

St. Joseph, F and G Road.—One-half mile of old road was surfaced with gravel on lots 14 and 15.

Thessalon Township, Con. 6.—One-half mile of new road, a continuation of last year's work, was opened up by taking out stone, grading 80 rods and gravelling 80 rods.

White Pennell Road.—Lots 11 and 12, Con. 2, Aberdeen, was improved a distance of 1¼ miles through a swale by being surfaced with gravel.

NORTH DIVISION BY-LAWS.

Alberton By-law No. "E."—Road No. 2, beginning at the north-east corner of section 16, Crozier, and running south to the river, 1 mile 120 rods were gravelled and ¾ miles side-brushed. Road No. 3, beginning at the north-east corner of section 16, Crozier, and thence 2 miles west, 1¼ miles of old road were gravelled. Road No. 4, River Road, from McIrvine townline to the Indian Reserve, was improved by spreading gravel on 1 mile 130 rods. Road No. 6, beginning at the south-east corner of section 19, Crozier, thence north to Miscampbell townline, 1¼ miles of old road were improved by being graded, re-building 1 wooden bridge and making a fill of 100 yds. of clay.

Assiginack By-law No. 376.—Road No. 1, between Cons. 1 and 2, lots 1 to 13 inclusive, 135 rods of old road were gravelled, 1 wooden culvert built and 1 bridge repaired with new cedar top. Road No. 2, on the line between Cons. 1 and 2, lot 13, to the townline of Manitowaning and Squirreltown, 224 rods of old road were gravelled and 3 concrete tile culverts put in. Road No. 3, Clover Valley Road was surfaced with gravel ½ mile, 1 cedar culvert built, 1 culvert re-built and 16 yds. of stone fill. Road No. 4, from the Village of Manitowaning westerly to Lehman's Corners, 140 rods of old road were graded and 40 rods gravelled. Road No. 5,

from Lehman's Corners north-west to Norquay's Corners, 175 rods of old road were gravelled and 2 cedar culverts repaired. Road No. 6, from Norquay's Corners north-west to the limit of the Municipality 172 rods of old road were surfaced with gravel.

Atwood By-law No. 87.—Road No. 1, on the line between section 9, Curran, and sections 25 and 32, Atwood, 65 rods of old road were graded. Road No. 2, on the road allowance between lots 16 and 17, thence between sections 2 and 3, 10 and 11, Curran, 1¼ miles of old road were graded and 58 rods ditched. Road No. 3, between lot 9 and section 36, Atwood, 83 rods were side-brushed and graded. Road No. 4, between lots 8 and 9, Atwood, south from the trunk road, 130 rods were side-brushed and graded. Road No. 5, on the line between Atwood and Worthington, commencing at the trunk road and running southward, 104 rods of new road were cleared, stumped and graded 30 ft. wide.

Balfour By-law No. 46.—Road No. 3, north-west through lot 4, Con. 4, was improved by grading 1½ miles and building 2 wooden culverts. Road No. 5, between Cons. 3 and 4, across lots 3 to 7, was improved by grading 3½ miles and building 2 wooden culverts. Road No. 6, between Cons. 2 and 3, lots 5 to 8, was improved by side-clearing and grading 3½ miles. Road No. 7, between Cons. 4 and 5, lots 1 to 3, was improved by grading 1½ miles and building 1 wooden culvert. Road No. 8, across Con. 2, between lots 8 and 9, was improved by grading 1 mile and ditching ¼ mile. Road No. 9, between Cons. 2 and 3, across lots 10, 11 and 12, was improved by grading 2 miles.

Billings By-law No. 227.—Road No. 2, Kagawong and Providence Bay Road from Con. 8, was improved by grading 80 rods, gravelling 50 rods, building 1 rock culvert and repairing 1 bridge. Road No. 3, on Con. 8, from lot 19 west, was improved by grading 2¾ miles, gravelling 100 rods and repairing 1 bridge. Road No. 4, on Con. 10, from lot 12 west, was improved a distance of 1 mile 120 rods by grading 200 rods, gravelling 27 rods, putting in 4 rock culverts, repairing 3 wooden bridges and making an earth fill of 30 yds. Road No. 5, on the 20th side-road from Cons. 8 to 14, was improved by gravelling ½ mile. Road No. 6, from Con. 10 to lot 12, north along the Lake Shore Road to Con. 14, thence west on Con. 14 to Love's Corner, was improved by grading 3¾ miles, gravelling 116 rods and repairing 2 culverts. Road No. 7, on the townline south from Love's Corner, ¼ mile was graded and gravelled. Road No. 8, from Con. 14 north to Billings and Allan townline, 100 rods were graded and 1 rock culvert put in. Road No. 9, from Kagawong east to John Buck's Corner, was improved by constructing a new bridge with 2 concrete abutments.

Blezard By-law No. 75.—Road No. 2, between Cons. 5 and 6, lots 11 and 12, 1 mile of old road was graded. Road No. 3, between Cons. 4 and 5, lots 9, 10 and 11, 1½ miles of old road were graded. Road No. 4, between Cons. 5 and 6, lots 1 to 5, 2 miles were graded, 3 cedar culverts built and 3½ miles of ditches constructed.

Blue By-law No. 24.—Road No. 2, between sections 4 and 9, 32 rods of new road were constructed and 1 wooden culvert put in. Road No. 3, between sections 25 and 36, 66 rods of new road were cleared, stumped and grubbed, 30 rods graded and 24 rods ditched. Road No. 4, south side of section 16, 30 rods of new road were cleared and stumped and 15 rods of it graded. Road No. 5, between sections 17 and 20, 112 rods of new road were cleared and stumped, 56 rods graded, 52 rods ditched and 2 wooden culverts built. Road No. 6, between sections 10 and 15, 65 rods of old road were surfaced with gravel. Road No. 7, between sections 11 and 14, 28 rods of new road were cleared, stumped and graded. Road No. 8, between

sections 20 and 21, 78 rods of old road were graded, 200 cu. yds. of a sand fill made and 1 wooden culvert put in.

Burpee By-law No. 63.—Road No. 1, between Cons. 9 and 10, lots 5 to 15, 152 rods of old road were side-brushed and gravelled. Road No. 2, between Cons. 7 and 8, lots 15 to 32, 1 mile 37 rods of road were improved by grading 52 rods, gravelling 135 rods, making a stone fill of 75 rods, a clay fill 50 yds. and building 1 cedar culvert. Road No. 3, between Cons. 6 and 7, lots 20 to 30, 260 rods of old road were graded, 48 rods gravelled and 1 cedar culvert built. Road No. 4, Main Road from lot 20, Con. 6, south-east to lot 37, Con. 2, was improved by grading 95 rods, gravelling 84 rods, making a stone fill of 10 yds. and repairing 2 cedar culverts.

Chapple By-law No. 209.—Road No. 1, the Bell Road from the west townline running east to section 27 was improved by gravelling 105 rods, ditching 12 rods and building 1 square cedar culvert. Road No. 2, townline of Shenstone and Tait, was improved by grading ¼ mile and building 2 square cedar culverts. Road No. 3, between sections 3 and 4, 9 and 10, 15 and 16, 15 and 22, 22 and 23, 26 and 27, 24 and 35, Tait, was improved by side-brushing 220 rods, grading 220 rods, ditching 25 rods, making 15 cu. yds. clay fill, 40 cu. yds. of stone fill and putting in 2 pile and 2 square cedar culverts. Road No. 4, centre line from river north to boundary of Municipality, 2 miles 60 rods were surfaced with gravel, 15 rods graded, a clay fill of 20 cu. yds. made and 3 culverts put in. Road No. 5, along the south side of sections 34, 35 and 36, Shenstone, 58 rods of old road were improved by grading 45 rods, corduroying 13 rods and putting in 2 culverts. Road No. 6, between sections 24 and 25, Shenstone, 90 rods of new road were stumped and graded and 1 cedar culvert built. Road No. 7, between Cons. 2 and 3, west half Dobie, a pile bridge was built and 75 cu. yds. of clay fill made. Road No. 8, Dobie and Mather townline, west half, 67 rods were graded, 36 rods ditched and 1 square cedar culvert built. Road No. 9, between Cons. 4 and 8, Dobie, west half, 56 rods of new road and 75 rods of old road graded 28 ft. wide. Road No. 10, between the north half of lots 8 and 9, Con. 6, Mather, 92 rods of new road were graded, 26 rods ditched and a clay fill of 155 cu. yds. made. Road No. 11, between lots 8 and 9, River Range, running north, 79 rods of new road were stumped and graded, 10 rods ditched and 2 square cedar culverts put in. Road No. 12, Dobie and Carpenter townline, 150 rods of old road were graded, 80 rods ditched and 3 rods corduroyed. Road No. 13, between Cons. 4 and 5, east half Dobie, 50 rods of new road were built by clearing, stumping and grading 32 rods, corduroying 18 rods and putting in 1 wooden culvert. Road No. 14, between lots 2 and 3, Con. 6, Dobie, and Con. 1, Mather, 300 rods of new road were cleared, stumped and grubbed. Road No. 16, Dobie-Mather townline, east end, 54 rods were graded, 20 rods ditched, 2 square cedar culverts built and 100 yds. of a clay fill made. Road No. 17, between Cons. 1 and 2, across lots 3 and 4, Mather, 100 rods of new road were cleared, stumped and graded and 1 wooden culvert built. Road No. 18, between lots 6 and 7, Cons. 4, 5 and 6, Mather, 70 rods of old road were improved, 32 rods being graded, 27 rods gravelled, 28 rods ditched and 78 cu. yds. of fill made. Road No. 20, between the C.N.R. right-of-way and Rosebery, lots 1 and 2, 60 rods of new road were cleared and graded and 1 wooden culvert built.

Conmee By-law No. 26.—Road No. 1, boundary of Conmee and O'Connor, lots 6 to 10, ¼ mile of old road was re-surfaced with earth. Road No. 2, through the middle of Con. 1, lots 1 to 9, 40 rods of old road were re-surfaced and the wagon ruts filled in. Road No. 3, between lots 6 and 7, north from Con. 1, ¼ mile of old road was re-surfaced with earth and a hill cut down, 100 yds. of earth being removed.

Road No. 4, between lots 4 and 5, north from Con. 1, ¼ mile of new road was constructed, 40 rods being ditched and 2 cedar culverts built. Road No. 5, between lots 2 and 3, north from Con. 1, 11 rods of new road were cleared, ¼ mile of old road re-surfaced and 3 cedar culverts put in. Road No. 6, between lots A and 1, north from Con. 1, ½ mile of old road was surfaced, 20 rods ditched and 3 wooden culverts built. Road No. 7, Con. 3, from Hume Station west, 40 rods of old road were graded and surfaced with earth and a hill cut down by removing 150 yds. of earth. Road No. 8, Con. 4, between lots 1 and 3, ½ mile of new road was opened up and 2 cedar culverts built. Road No. 9, Mokomon Road from Mokomon Station west, 55 rods of new road were cleared, stumped and grubbed and 27 rods of it ditched. One-half mile of old road was gravelled.

Dilke By-law No. 12.—Road No. 1, between Dilke and Morley, north from the trunk road, ½ mile of new road was graded and 1 cedar culvert built. Road No. 2, between sections 34 and 35, north from the trunk road 1¼ miles of old road were graded, 28 rods ditched and 1 galvanized iron culvert put in. Road No. 3, between sections 33 and 34, north from the trunk road 82 rods of old road were graded and 1 wooden culvert placed. Road No. 4, section 33, south side, 140 rods of new road were cleared and graded and 1 wooden culvert put in. Road No. 5, Dilke and Worthington townline, 48 rods of new road were cleared, stumped and graded.

Drury, Denison and Graham By-law No. 151.—Road No. 1, Drury township, 9 miles of old road throughout this township were repaired by being graded, 1 mile of which was cleared and stumped, 6 wooden culverts were put in, 2 timber bridges constructed and 1 mile ditched. Road No. 2, Denison township, 8 miles of old road were graded, 3 concrete culverts put in and 1 wooden bridge built, ½ mile ditched and 2 wooden culverts repaired. Road No. 3, Graham township, 3 miles of old road were improved by being graded, ditching 1½ miles and putting in 8 concrete culverts.

Emo By-law No. 200.—Road No. 1, Trunk Road south from townline of Lash and Aylesworth, 1 mile 65 rods were surfaced with gravel, 2 cedar culverts and 1 tamarack bridge built. Road No. 2, between lots 8 and 9, Aylesworth, 100 rods of old road were side-brushed, 20 rods graded, 50 rods gravelled, 2 cedar culverts built and a clay fill of 20 cu. yds. made. Road No. 3, Trunk Road from Crozier Road south was surfaced with gravel 100 rods. Road No. 4, Trunk Road from House Road south was surfaced with gravel ¾ miles and 1 square cedar culvert built. Road No. 5, the Crozier Road east from the Trunk Road was graded 43 rods and surfaced with gravel 215 rods. Road No. 6, between sections 10 and 11, Lash, 50 rods were graded and 89 rods gravelled. Road No. 7, between sections 1 and 2, Lash, 42 rods were gravelled. Road No. 8, west side of section 3, Lash, ¼ mile was graded and the abutments of the timber bridge rebuilt. Road No. 9, Lalonde Road east from the Trunk Road was surfaced with gravel 50 rods. Road No. 10, the House Road, 300 rods were graded, 24 rods ditched and 125 rods corduroyed. Road No. 11, Trunk Road west from House Road, 85 rods were gravelled and 2 plank culverts were put in. Road No. 12, running north from Emo, 100 rods were surfaced with gravel. Road No. 13, Carpenter-Lash townline east from lot 6, 84 rods were surfaced with gravel, 15 rods ditched and 3 cedar culverts built. Road No. 14, McKay Road east from lot 6, 30 rods of new road were cleared, 128 rods graded, 80 rods ditched and 1 plank culvert built. Road No. 15, Burriss Road east from lot 5, ½ mile was graded, 1 wooden culvert put in, 1 wooden bridge recovered with 3-in. plank and 16 rods corduroyed. Road No. 16, Price Road, 98 rods of new road were graded, 24 rods of it being ditched, 20 rods corduroyed

and a clay fill of 60 cu. yds. made. Road No. 17, west from lot 2, Con. 5, Carpenter, 45 rods of new road were cleared and graded, 1 wooden bridge built, 1 bridge recovered with cedar and a clay fill of 100 cu. yds. made. Road No. 18, Barnhardt Road, 20 rods of old road were improved by filling a cedar abutment and making a clay fill of 465 cu. yds. Road No. 19, Carpenter and Lash townline east from lot 9, 125 rods were surfaced with gravel and 1 square cedar culvert built. Road No. 20, McKay Road from lot 8 east, 50 rods were surfaced with gravel. Road No. 21, Allan Road was surfaced with gravel 75 rods. Road No. 22, Bullied Road north from Con. 3, 150 rods were graded. Road No. 23, the Dungey Road north from Con. 1, 60 rods were gravelled, 1 square cedar culvert built and a clay fill of 150 cu. yds. made. Road No. 24, between lots 10 and 11, north from Con. 3, 76 rods of new road were cleared, stumped and corduroyed. Road No. 25, Shipton Road was improved 110 rods by side-brushing 72 rods and grading 110 rods. Road No. 26, from the head of Walker St., Emo, to the north end of Florence St., 100 rods were surfaced with gravel.

Gordon By-law No. 138.—Road No. 1, between Cons. 8 and 9, from lot 13 to 30, 2 miles of old road were graded and 150 rods surfaced with gravel. Road No. 2, Cons. 6 and 4, lots 12 to 22, 1¼ miles of old road were graded, 76 rods gravelled, 4 culverts put in and 300 rods of ditch cleaned. Road No. 3, Government Road, lots 1 to 15, 129 rods were graded and gravelled. Road No. 4, Batty Road, 217 rods were graded and 395 rods gravelled. Road No. 5, Scotland Road, 1 mile 120 rods were graded, 30 rods gravelled and 1 bridge repaired with cedar timber. Road No. 6, Ice Lake Road, 232 rods were surfaced with gravel. Road No. 7, Cons. 11 and 12, 106 rods were surfaced with gravel and 1 cedar culvert repaired.

Howland By-law No. 114.—Road No. 1, between Cons. 10 and 11, from lot 20 eastward, 121 rods were graded and gravelled and 2 cedar culverts built. Road No. 2, between lots 15 and 16, across Cons. 10 and 11, 22 rods were gravelled, 1 rock culvert with cedar top put in and a fill 150 yds. stone and 75 yds. clay made. Road No. 3, from Sheguiandah School along the Main Road 56 rods of old road were graded and surfaced with gravel, 25 rods of old corduroy being removed. Road No. 4, Howland and Bidwell townline from lot 7 east, 122 rods were surfaced with gravel. Road No. 5, between lots 2 and 3, Con. 9, Bidwell, 63 rods of old road were improved by side-brushing 10 rods and grading and gravelling 63 rods. Road No. 6, from the bridge at Burnette's Gulley 63 rods of old road were surfaced with gravel. Road No. 7, between lots 15 and 16, Con. 11, Bidwell, ½ mile of old road was graded and surfaced with gravel and ditched on one side. Road No. 8, West Bay Road, 1¼ miles of old road were improved by grading 1 mile, gravelling 100 rods and repairing 1 bridge. Road No. 9, from lot 23, Con. 6, Bidwell, 140 rods were surfaced with gravel. Road No. 10, between lots 36 and 37, Con. 2, Howland, 100 rods of old road were gravelled.

Jaffray and Mellick By-law No. 12.—Road No. 1, Pine Portage Road, from lot 9, Con. 1, Jaffray, to Hilly Lake, 3 miles of old road were improved by stumping ½ mile, grading and gravelling 250 rods, corduroying 18 rods and covering it with clay and gravel, digging 2 offtake ditches and building 3 wooden culverts. Road No. 3, Scramble Road, 4 miles of general repairs were made on this road by grading and ditching and cutting down hills and removing boulders from the roadbed, 6 corrugated iron culverts were placed and 55 rods of corduroy laid and covered with clay and gravel. Road No. 4, East Mellick Road, 3 miles of old road were improved by filling up holes, removing boulders, ditching ½ mile, grading ½ mile and putting in 3 corrugated iron culverts. Road No. 5, Charlebois Road, 2 miles were improved by filling up holes, cutting down hills, stumping, grubbing and

gravelling and building 3 wooden culverts. Road No. 6, St. Germain Road, 2 miles of old road were improved by grading ½ mile, gravelling ½ mile, digging 2 offtake ditches and putting in 2 wooden culverts. Road No. 9, West Mellick Road, 3½ miles were improved by gravelling, filling up holes with clay and rock and building 4 wooden culverts. Road No. 11, Ritchie Road, 3½ miles were improved by grading and gravelling, cutting down hills, removing boulders, putting in 2 iron culverts and laying 37 rods of corduroy and covering it with gravel and clay. Road No. 14, Anderson Road. This work consisted of three different branch roads, general repairs to Anderson Road 2 miles, mostly gravelling and filling up holes. Sordler Road consisted of 1 mile of new road partly completed. Log Lake Branch Road was repaired 1 mile by gravelling, filling up holes and putting in 2 wooden culverts.

Johnson By-law No. "A" 64.—Road No. 1, Port Lock Road, ¼ mile of old road was improved by grading and gravelling 27 rods, putting in 1 concrete culvert and building 1 wooden bridge. Road No. 2, Block L, along lot 53, Desbarats Survey, 15 rods were gravelled and a wooden bridge repaired. Road No. 3, between lots 28 and 29, Desbarats Survey to Tarbutt Road, 58 rods of old road were surfaced with gravel. Road No. 4, between lots 4 and 5, H. Survey, 20 rods of old road were improved by making a cut and fill of 900 yds. and building 1 wooden bridge.

Korah By-law No. 138.—Division No. 1.—Road No. 1, Korah and Tarentorus townline north from the 4th line, 10 rods were surfaced with gravel. Road No. 2, sections 1 and 12, Korah, 20 rods were ditched and 1 wooden culvert put in. Road No. 3, People's Road, 4 miles were improved by side-brushing 25 rods, grading 3 miles, gravelling 1 mile 40 rods and making a fill of 4 yds. of rock and 30 yds. of earth. Road No. 4, between sections 23 and 24, and 13 and 14, Korah, 5 rods were brushed and a side hill cut of 40 yds. made. Road No. 5, 4th line from People's Road east, 28 rods were surfaced with gravel. Road No. 6, 4th line from People's Road west, 100 rods were improved by side-brushing and ditching 60 rods and crowning 40 rods with 177 yds. of gravel. Road No. 7, Korah Road from 2nd line north, 2 miles 200 rods were improved by being graded, 70 rods of which were side-brushed and ditched, 210 rods gravelled and a hill cut and fill of 213 yds. made. Road No. 8, between sections 26 and 27, Korah, 2 earth cuts and fills were made totalling 1,903 cu. yds. Road No. 9, 3rd line west from Korah Road, 180 rods were improved by grading ¼ mile and gravelling ¼ mile. Road No. 10, between sections 26 and 23, Korah, 1¾ miles were graded and ½ mile surfaced with gravel. Road No. 11, 2nd line from tap drain centre section 35, Korah, east to Korah Road, 2 metal culverts were placed. Road No. 12, section 25, Korah, 16 rods were surfaced with gravel. Road No. 13, sections 25 and 26, Korah, 49 rods were surfaced with gravel. Division No. 2.—Road No. 1, between sections 27 and 28, Korah, ½ mile of old road was surfaced with 360 yds. of gravel and a clay hill and cut of 416 yds. made. Road No. 2, between sections 21 and 22, ¼ mile of old road was surfaced with gravel. Road No. 3, 4th line from centre of section 15 west, ½ mile was surfaced with gravel. Road No. 4, between sections 21 and 28, ¾ miles were surfaced with gravel. Road No. 5, Thompson line north of 3rd line, 1 mile was improved by grading ½ mile and spreading gravel on ½ mile. Road No. 6, section 21, Korah, from the 3rd line north ¾ miles were surfaced with gravel. Road No. 7, North Korah Road, 1¼ miles of new road were chopped out. Road No. 8, the old Goulais Bay Road, a new cedar culvert was put in on this road. Road No. 9, sections 19 and 34, ¾ miles of old road were improved by being gravelled and making a clay fill of 37½ yds. Road No. 10, Creek Road, section

19, 60 rods of old road were improved by gravelling 30 rods and making a hill cut and fill of 40 yds. Road No. 11, Korah-Prince townline, 60 rods were surfaced with gravel and a clay fill of 25 yds. were made. Division No. 3.—Road No. 1, 2nd line from tap ditch centre section 35 west, 1 mile 40 rods of old road were improved by cleaning out 190 rods of ditch on each side, grading 190 rods and spreading 334 yds. of gravel on 190 rods of road. Road No. 2, between sections 34 and 35, Korah, 1,158 yds. of slag were spread over ½ mile of old road. Road No. 3, sections 32 and 33, Korah, 1 old wooden bridge was repaired and a new covering put on it. Division No. 4.—Road No. 1, base line from Spring Creek, centre of section 34, west, 4½ miles of old road were improved by grading 2½ miles, gravelling 165 rods, spreading slag on 1 mile, deepening an old ditch 1 mile in length, making a rock and earth fill of 78 yds. and putting in 2 wooden culverts. Road No. 2, Moore's sideroad was improved by spreading slag on ½ mile. Road No. 3, Thompson line, section 32, slag was spread on 30 rods. Road No. 4, sections 31 and 32, Korah, the old bridge was re-built and slag and gravel filled in at each end. Road No. 5, Korah-Prince townline from centre of section 31 south to the river, 1¼ miles of old road were improved by side-brushing ¾ miles, grading ¾ miles, gravelling 220 rods and ditching 185 rods. Road No. 6, between sections 10 and 11, Parke township, ½ mile of old road was side-brushed and a hill cut and fill made, and 3 wooden culverts built.

Laird By-law No. 111.—Road No. 1, between sections 7 and 18, ¼ mile was graded and gravelled and an earth fill of 500 cu. yds. made. Road No. 2, between sections 4 and 9, ¼ mile was surfaced with gravel and ditched. Road No. 3, between I and H, ½ mile of old road was improved by being side-brushed, gravelling 94 rods, putting in 3 wooden culverts and making an earth cut and fill of 200 yds. Road No. 4, between section 31 and C, ½ mile of old road was graded, 60 rods gravelled and 1 wooden culvert built. Road No. 5, between section 18 and F, 8 rods were gravelled, 1 wooden culvert built and a cut and fill of 200 yds. made.

Lavallee By-law No. 154.—Road No. 1, between lots 16 and 17, Woodyatt township, 52 rods of old road were graded and gravelled. Road No. 2, from lot 32 west on River Road, Woodyatt, 148 rods of old road were improved by grading 120 rods and gravelling 38 rods. Road No. 3, between lots 40 and 41, Woodyatt, 110 rods of old road were improved by grading 70 rods, gravelling 40 rods, ditching 44 rods and putting in a pile culvert. Road No. 4, between lots 32 and 33, R.R., Woodyatt, 250 rods of old road were graded and ¾ miles of ditch cleaned out. Road No. 5, between lots 24 and 25, R.R., Woodyatt, 125 rods of new road were opened up by stumping and grubbing 40 rods and grading 125 rods. Devlin township.—Road No. 6, between sections 4 and 5, 40 rods of old road were gravelled and 8 cu. yds. of a clay fill made. Road No. 7, between sections 5 and 6 and 4 and 9, 35 rods of old road were gravelled, 2 square cedar culverts built and 50 yds. of a clay fill made. Road No. 8, between sections 8 and 9, 60 rods of old road were gravelled. Road No. 9, between sections 16 and 17, 54 rods of old road were gravelled. Road No. 10, between sections 17 and 20, 23 rods of old road were gravelled. Road No. 11, between sections 19 and 30, 77 rods of new road were cleared, stumped and grubbed. Road No. 12, between sections 32 and 33, and thence west on the north boundary, 1 mile of old road was graded and another 25 rods surfaced with gravel. Road No. 13, between sections 27 and 28, 20 rods of old road were graded and 80 rods gravelled. Road No. 14, between sections 10 and 11, 4 rods of old road were improved by making a clay fill of 300 cu. yds. Road No. 15, between sections 10 and 15, 65 rods of new road were graded, 1 cedar culvert built and a stone fill of 10 cu. yds. made. Road No. 16, between sections

14 and 15, 75 rods of old road were surfaced with gravel. Road No. 18, between sections 34 and 35, ½ mile of old road was graded and 110 rods surfaced with gravel. Road No. 19, between section 34, lot 7, Burriss, ½ mile of new road was cleared, stumped and grubbed and 1 wooden culvert built. Road No. 20, between section 35 and lot 6, Burriss, 75 rods of new road were graded, 30 rods of it surfaced with gravel and 12 rods of it corduroyed. Burriss township.—Road No. 21, between Cons. 1 and 2, across lot 7, 60 rods of new road were cleared, stumped and grubbed. Road No. 22, between Cons. 2 and 3, from lot 8 east, 50 rods of old road were improved by grading 40 rods, putting in a cedar culvert and a stone fill of 100 cu. yds. Road No. 23, between Cons. 4 and 5, from lot 9 east, 25 rods of old road were improved by putting in 1 cedar culvert, 100 cu. yds. of stone fill and 75 cu. yds. of clay fill. Road No. 24, between Cons. 2 and 3, from lot 4 east, 300 rods of new road were cleared, stumped and grubbed and 25 rods of it graded. Road No. 25, between lots 4 and 5, across Con. 1, ½ mile of old road was graded, 25 rods gravelled and a stone fill of 15 yds. made. Road No. 26, between lots 4 and 5, across Cons. 5 and 6, 120 rods of old road were improved by grading 60 rods, gravelling 55 rods, ditching 15 rods, making a stone fill of 8 cu. yds. and a clay fill of 55 cu. yds. Road No. 27, between lots 4 and 5, across the north half of Con. 6, 60 rods of old road were improved by grading 45 rods, building 1 cedar culvert and making a fill of 110 cu. yds. of stone and 120 cu. yds. clay. Road No. 28, between lots 8 and 9, across Con. 5, 80 rods of old road were surfaced with gravel, 1 cedar culvert built and a fill 60 yds. stone and 40 yds. clay made. Road No. 29, between lots 10 and 11, across Con. 4, 60 rods of old road were improved by making a fill consisting of 150 cu. yds. of stone and 200 cu. yds. of clay. Road No. 30, Burriss and Carpenter boundary, lot 12, ½ mile of new road was cleared, stumped and grubbed, 50 rods graded, 30 rods ditched and 1 cedar culvert built.

Morley and Pattullo by-law No. 144.—Road No. 1, Trunk Road across lots 7 to 16, R.R., Morley, ½ mile of new road was graded, ¼ mile of old road graded and 1 concrete tile culvert put in. Road No. 2, Trunk Road across lots 17 to 26, R.R., Morley, 50 rods of old road were graded, 1 square cedar culvert built, 1 bridge recovered with 2-in. plank and a clay fill of 160 yds. made. Road No. 3, commencing between lots 16 and 17, R.R., Morley, and running north, 250 rods of old road were surfaced with gravel. Road No. 4, between sections 11 and 14, Morley, 180 rods of old road were surfaced with gravel. Road No. 5, between sections 14 and 23, Morley, 170 rods of old road were surfaced with gravel and 15 rods ditched. Road No. 6, between sections 15 and 22, Morley, 122 rods of old road were graded. Road No. 8, between sections 27 and 34, Morley, 1 mile 55 rods were surfaced with gravel and 48 rods corduroyed. Road No. 9, between sections 25 and 26 and 35 and 36, Morley, 1 mile 20 rods were graded, 20 rods ditched, 1 cedar culvert and 20 cu. yds. of a stone fill put in. Road No. 10, between section 31, Shenstone, and 36, Morley, ½ mile of old road was improved by side-brushing 160 rods, grading ½ mile and putting in 1 cedar culvert and a clay fill of 50 cu. yds. Road No. 11, Morley-Dilke townline, 1 mile of old road was surfaced with gravel 14 in. deep. Road No. 12, Morley-Pattullo townline, 50 rods of old road were graded and 1 mile surfaced with gravel. Road No. 13, between sections 27 and 34, Pattullo, 1 mile of new road was cleared and 70 rods of it graded. Road No. 14, between sections 3 and 4, Pattullo, 130 rods of old road were graded, 15 rods corduroyed and 3 wooden culverts put in. Road No. 15, between sections 3 and 4, Pattullo, 120 rods of new road were cleared, stumped, graded and ditched. Road No. 17, Nelles-Pattullo townline, 50 rods of old road were graded and ditched on both sides and 1 cedar culvert built.

Neebing By-law No. 348.—Road No. 1, Crooks township, from the Trunk Road to Cloud River 1 mile 40 rods of new road were cleared, stumped, graded and surfaced with earth and 3 cedar culverts built. Road No. 3, Pardee Township, lots 7 and 8, Cons. 3 and 4, 2¼ miles of new road were cleared, stumped and grubbed and 5 tamarack culverts built.

Oliver By-law No. 166.—Road No. 1, on Con. 7, lot 13, 1 mile of new road was cleared, stumped and grubbed, 60 rods graded, surfaced with earth and ditched and 10 cedar culverts built. Road No. 2, on the 1st sideroad from the 7th Con. to the Dawson Road, ½ mile of new road was cleared, stumped and grubbed, 50 rods surfaced with gravel, 20 rods corduroyed, 40 rods ditched and 3 tamarack culverts built. Road No. 3, on the 2nd sideline from the 3rd to the 4th Cons., 2 miles of new road were cleared, stumped and grubbed, 1 mile graded, gravelled and ditched and 9 cedar culverts built. Road No. 4, Oliver-Paipoonge townline and south on the 4th sideline, 3 miles of old road were improved by brushing out each side, grading and surfacing 1½ miles, spreading gravel on ½ mile, ditching 200 rods and building 5 wooden culverts. Road No. 5, between Cons. 5 and 6, across lot 4, ½ mile of old road was improved by being crowned with stone and brushing out the sides, cutting out a hill by blasting out 10 yds. of rock and re-surfacing the ½ mile with earth.

Paipoonge By-law No. 141.—Road No. 1, Con. 2, from lot 10 west 1¼ miles of old road were graded and gravelled and 1 cedar culvert built. Road No. 2, on Con. 4, from lot 15 west ¾ miles of old road were gravelled and part of it graded. Road No. 3, the 10th sideline from the schoolhouse south, 20 rods were graded, crowned with earth and ditched, also 15 plank culverts built. Road No. 4, Con. 1, lots 10 to 15, 1 mile of new road was cleared, stumped and grubbed, 30 rods graded, surfaced with earth and ditched, 5 wooden culverts were placed. Road No. 5, Con. A, south of the river from Stanley Bridge east, ¼ mile of old road was graded and surfaced with earth. Road No. 6, Con. F, from lot 8 south, ½ mile of old road was graded and surfaced with earth and 1 cedar culvert built. Road No. 7, Paipoonge and O'Connor townline, from lot 20 south, 1 mile was graded and surfaced with earth and 1 cedar culvert put in. Road No. 8, Con. E, from Mining Road south, ½ mile was graded and surfaced with earth.

Plummer Additional By-law No. 146.—Road No. 1, Garden Bay Road between Cons. 3 and 2, 100 rods were crowned, 40 with trap rock and 60 with gravel. Road No. 2, Jeffrey Road, between lots 2 and 3, across Con. 4, ½ mile of old road was graded, ¼ mile gravelled and 1 wooden culvert placed. Road No. 3, Cloudslee Road, ½ mile was surfaced with gravel. Road No. 4, road to Rydal Bank, Con. 3, 1 mile was improved by side-brushing ½ mile, grading ½ mile and gravelling 1 mile. Road No. 5, between Cons. 5 and 6, Cuthbertson Location, 2 miles of old road were improved by grading ¾ miles, gravelling ½ mile and repairing 5 small culverts. Road No. 6, road to Cariboo, between Keating and Cuthbertson Locations, 1 mile of old road was improved by gravelling 212 rods, cleaning 40 rods of ditch. Road No. 7, centre line of Keating Location, ¾ miles of old road were improved, 60 rods being graded, 65 rods gravelled and 60 rods of ditch cleaned. Road No. 8, between Cons. 3 and 4, Keating, 100 rods of old road were surfaced with gravel and 40 rods of ditch cleaned.

Prince By-law No. 57.—Road No. 1, base line road, sections 33 and 34, 3½ miles of old road were improved by grading 120 rods, distributing 59 yds. of gravel, making an earth fill of 83 yds., ditching 116 rods and building a wooden bridge over a washout. Road No. 2, 2nd line road, sections 34 and 35, 2¾ miles of old road were improved by distributing 126 yds. of gravel, cleaning 145 rods of ditch,

making a rock fill of 5 yds. and an earth fill of 21 yds. Road No. 3, 2nd line road, sections 33 and 34, 3 miles of old road were improved by distributing 343 yds. of gravel, cleaning 248 rods of ditch and making a rock fill of 12 yds. Road No. 4, 2nd line west, 1½ miles were improved by distributing 104 yds. of gravel and cleaning 40 rods of tap ditch and 45 rods of road ditch. Road No. 5, Mount East Roads, section 3, 2 miles of old road were improved by being side-brushed on each side, removing stones, filling holes and ruts, distributing 9 yds. of gravel, filling a washout with 26 yds. of earth and building 1 wooden culvert. Road No. 6, Mount East Road, starting on the 4th line, section 23, and going west, 1 mile of old road was brushed out on each side, a hill cut and fill of 60 yds. and an earth fill of 214 yds. made and 55 rods of old corduroy covered with earth. Road No. 7, Mount West Road from Haines Road, 120 rods of old road were improved by filling up holes and ruts, side-brushing 30 rods, making a hill cut and fill of 13 yds. and an earth fill of 26 yds.

Rayside By-law No. 150.—Road No. 1, between Cons. 1 and 2, from lot 6 west 4 miles of old road were improved by being ditched, 1 mile stumped and grubbed, 1½ miles graded and 4 wooden culverts placed. Road No. 2, between lots 6 and 7, across Con. 3, 1 mile of old road was graded, ½ mile ditched and 1 wooden culvert placed. Road No. 3, across lots 7, 8 and 9, Con. 4, 1 mile of old road was graded and ditched on both sides, 3 wooden culverts were put in. Road No. 4, between lots 6 and 7, across Con. 5, ½ mile of old road was improved by clearing and stumping 60 rods, grading and ditching 40 rods and building 1 wooden bridge, 18-ft. span.

Sandfield By-law No. 214.—Road No. 1, from lot 1, Con. 1, to lot 7, Con. 3, 180 rods were surfaced with gravel. Road No. 2, between Cons. 2 and 3, lots 8 to 30, 138 rods of old road were surfaced with gravel, 7 rods of ditch cleaned out and an earth fill of 20 yds. made. Road No. 3, Main Road, lot 14, Con. 4, to lot 30, Con. 7, 156 rods were surfaced with gravel. Road No. 4, from lot 18, Con. 8, to Lake Manitou, 83 rods of new road were cleared and graded and 2 rock culverts built on it; 84 rods of old road were improved by grading 52 rods, gravelling 84 rods and building 2 cedar culverts and 1 new wooden bridge.

St. Joseph By-law No. 417.—Road No. 1, across Cons. E and F, between lots 14 and 15, ½ mile of old road was improved by grading 40 rods, gravelling 124 rods and making a rock fill of 200 yds. Road No. 2, Shore Road, lots 15 to 20, 1 mile of old road was improved by being graded, surfaced with gravel 120 rods and putting in 3 wooden culverts. Road No. 3, across lots 6 and 7, Con. 5, ½ mile of old road was improved by grading 65 rods, gravelling 65 rods and making a rock fill of 200 yds. Road No. 4, between lots 10 and 11, across Con. F, ½ mile of old road was improved by grading 60 rods, gravelling 116 rods and building 1 wooden culvert. Road No. 5, Huron Line Road, lots 23 to 27, ½ mile of old road was improved by being graded, gravelled 130 rods and repaired 1 wooden bridge. Road No. 6, Con. C, lots 5 to 8, 250 rods of old road were surfaced with gravel. Road No. 7, Con. A, lots 11 and 12, 68 rods were surfaced with gravel. Road No. 8, A Line Con. from Con. F to A, ¼ mile of old road was surfaced with gravel.

Shuniah By-law No. 413.—Road No. 1, North Branch Road, 2 miles of old road were re-surfaced with gravel and 1 bridge covered with new plank. Road No. 1-B, lot 17, Con. B, North Branch Road, ½ mile of new road was cleared, stumped and grubbed. Road No. 2, Black Bay Road, ½ mile of old road was surfaced with gravel, ½ mile surfaced with earth and 3 cedar culverts built. Road No. 2-B, North Branch Road from lot 18, Con. C west, ¾ miles of new road were cleared, stumped and grubbed and 20 rods of it graded and surfaced with earth. Road No.

3, Dawson Road, McIntyre, 8 miles of old road were improved by filling in wagon ruts, grading and surfacing with earth 1¾ miles, building 3 pine culverts, recovering a bridge and making a rock fill of 300 yds. Road No. 4, Oliver Road, 6 miles of old road were graded with grader and 1 mile surfaced with gravel. Road No. 5, John St. Road, 6 miles of old road were repaired, 2 miles being gravelled and 3 cedar culverts built. Road No. 6, Centre Road from Oliver Road to Dawson Road, 2 miles of old road were surfaced with gravel, 3 plank culverts put in and 1 bridge covered with new 3-in. plank. Road No. 7, section 27, ¼ mile was resurfaced, 3 cedar culverts built and 1 bridge covered with plank. Road No. 8, between sections 4 and 19, ½ mile of road cut out last year was further improved by grading 80 rods, surfacing with earth 80 rods, building 3 spruce culverts and ditching both sides. Road No. 9, Mining Locations 27 to 32, 1½ miles of new road were cleared, stumped and grubbed and 1 mile surfaced with gravel. Road No. 11, from lot 7, Con. B, McIntyre, north to Gorham, 1 mile of old road was graded with grader and surfaced with earth and gravel. Road No. 12, lot 12, Con. B, McIntyre, 1 mile of old road was surfaced with gravel. Road No. 13, lot 22, Con. B, McIntyre, 1 mile of old road was surfaced with earth and gravel and 1 cedar culvert placed. Road No. 15, from the Dawson Road to lot 29, Con. B, Ware township, ½ mile of old road was improved by grading and ditching 80 rods, surfacing with earth ½ mile and building 1 cedar culvert. Road No. 16, 16A and 16B, from lot 23, Con. A, through the White Survey, ½ mile of old road was improved by stumping and ditching ¼ mile, grading and surfacing ¼ mile, building 1 tamarack culvert and repairing 1 bridge. Road No. 18, Oliver-McIntyre townline, ½ mile of old road was graded and surfaced with earth, ¼ mile ditched and 3 spruce culverts put in. Road No. 19, between lots 1 and 2, south from the Oliver Road, ½ mile of new road was cleared 40 ft. wide. Road No. 20, from school house No. 2, Dawson Road to John St., ¼ mile of new road was cleared 66 ft. wide and ¾ miles of old road stumped and grubbed and surfaced with gravel, 80 rods ditched and 4 cedar culverts built. Road No. 21, between lots 25 and 26, White Survey, from John St. to Morgan Road, 1¾ miles of new road were cleared 66 ft. wide. Road No. 26, between lots 25 and 26, White's Survey and west along lot 18, Con. A, ¼ mile of old road was surfaced with earth and 3 tamarack culverts built.

Tarbutt and Tarbutt Additional By-law No. 6.—Road No. 1, between Cons. 5 and 6, lots 2 to 4, 85 rods were surfaced with gravel. Road No. 2, between lots 2 and 3, across Con. 1, 75 rods were graded and surfaced with gravel. Road No. 3, between lots 6 and 7, across Con. 6, 100 rods were graded and 125 rods gravelled. Road No. 4, Laird and Tarbutt boundary, lot 7, ¼ mile of old road was surfaced with gravel.

Tarentorus By-law No. 158.—Road No. 1, Great Northern Road, 3 miles of old road were improved by side-brushing 80 rods, gravelling 2 miles, ditching 1 mile 95 rods, putting in 11 concrete culverts and a rock fill of 150 yds. Road No. 2, Garden River Road, 4¾ miles of old road were improved by side-brushing 105 rods, distributing 188 yds. of gravel, ditching 2½ miles, making an earth excavation for stone bed 152 yds., putting in 3 tile culverts and recovering a wooden bridge. Road No. 3, through sections 22, 15, 9 and 3, 3 miles of old road were improved by side-brushing ½ mile, distributing 1,029 yds. of gravel, ditching 1 mile, removing boulders, making a hill cut and fill of 370 yds., a rock fill of 51½ yds., a clay fill of 116 yds. and putting in 2 metal culverts. Road No. 4, Korah and Tarentorus boundary, ¾ miles of old road were improved by side-brushing 60 rods, grading 155 rods, distributing 550 yds. of gravel, making a sand cut and fill of

880 yds. and putting in 3 concrete tile culverts. Road No. 5, 3rd line from Garden River Road to west townline, ½ mile of old road was surfaced with gravel and a clay side hill cut of 1,041 yds. made. Road No. 6, 4th line to Landslide Road, 2 miles of old road were improved by removing stone, filling up holes and ruts, side-brushing 40 rods, putting in 600 ft. of new plank on an old bridge and making an earth cut and fill of 140 yds., a rock fill of 250 yds. and an earth fill of 27 yds. Road No. 7, Danz Road, section 15, 1¾ miles of old road were improved by being graded and gravelled, putting in 2 tile culverts and side-brushing 40 rods on each side. Road No. 8, St. Mary's sections 30 and 31, 50 rods of new road were cleared, stumped and graded and 180 rods of gravel spread on ¼ mile of old road. Road No. 9, St. Mary's from part lot 1, Con. 4, through sections 21 and 33, 100 rods of old road through very low and flat land covered with soft black muck were improved by grubbing 97 rods, spreading 150 yds. of gravel, putting in 3 culverts, cleaning a tap ditch 1½ miles in length, digging a ditch on each side of the road 48 rods in length and making an earth fill of 175 yds.

Thessalon By-law No. 14.—Road No. 1, north from the railway crossing on the west side of the river 55 rods were surfaced with gravel. Road No. 2, section 28, ½ mile of old road was surfaced with gravel. Road No. 3, section 22, 90 rods were gravelled. Road No. 4, section 1, 10 rods of old road were improved by making a rock cut and fill of 300 yds. Road No. 5, section 30, ½ mile of old road was graded and 30 rods of it surfaced with gravel.

Thompson By-law No. 106.—Road No. 1, section 26, ¾ miles of old road were graded and 40 rods surfaced with gravel. Road No. 2, between sections 20 and 21, ¼ mile of old road was surfaced with gravel. Road No. 3, north side of section 8, 120 rods of old road were improved by grading 80 rods and gravelling 40 rods.

Worthington By-law No. 72.—Road No. 1, between sections 32 and 33, north from the trunk road 135 rods of new road were cleared, stumped and grubbed, 65 rods graded and 1 spruce culvert built. Road No. 2, between lots 8 and 9, south from the trunk road, 48 rods of old road were surfaced with gravel. Road No. 3, across lots 17 to 48 inclusive, 1¾ miles were side-brushed 25 ft. on each side and 1 mile 163 rods graded. Road No. 4, Blue and Worthington, section 31, 120 rods of new road were cleared, stumped and grubbed, 60 rods graded and 1 wooden culvert built.

WEST DIVISION.

Armour Township, between Lots 10 *and* 11, *across Cons.* 3 *and* 4.—Gravel and earth were spread on 60 rods of old road after being graded. The road runs through a swamp and 2 cedar culverts were built on it.

Baxter Township, from Lot 20, *Con.* 10, *to Lot* 15, *Con.* 9.—A new road was cut out 1¼ miles in length from Go Home Bay and ¾ miles of it stumped, grubbed and graded, making a fair road for part of the distance.

Baxter Township, Port Severn School Road.—On this road general repairs were made a distance of ¾ miles by grading and surfacing with earth ¾ miles, stumping and grubbing 40 rods and building 3 wooden culverts.

Bethune Township, Con. 12, *Lots* 19 *to* 25 *and south to the Village of Ravensworth.*—A rough, rocky piece of road was improved 1½ miles by clearing, grading and surfacing with earth 1 mile 24 rods, and building 6 wooden culverts.

Bethune Township, between Lots 10 *and* 11, *across Cons.* 13 *and* 14.—One mile of new road was cleared, stumped, graded and surfaced with earth 12 ft. wide and 7 log culverts put in.

Brunel Township, on the Huntsville-Baysville Road north from Con. 8.—One and one-half miles of old road were improved by brushing out the sides for 100 rods, grading 1 mile, removing large boulders, hauling 237 loads of gravel and spreading it 1 load deep on 200 rods, putting in 2 wooden culverts and making other general repairs.

Carling Township from Killbear Road to Deep Bay.—Through a low flat ¾ miles of old road were side-brushed, stumped, graded and surfaced with earth and 1 wooden culvert built.

Carling Township from Lot 16, *Con.* 2, *to Lot* 7, *Con.* 1.—One mile of new road was stumped, surfaced and graded with earth and 7 wooden culverts put in. A fill 3 ft. deep, containing 150 yds. of earth, was made.

Chaffey and Stisted Townships, Huntsville to Aspdin.—One and one-half miles of old road were graded with road grader and 140 loads of gravel were hauled and placed on the road. A considerable number of boulders were removed and 4 wooden culverts put in.

Chapman Township, North Boundary, Lots 9 *to* 18.—One mile of new road was cleared, stumped and grubbed. The overseer levelled the ground so as to use the road before it was graded.

Croft Township, Lot 12, *Con.* 8.—This work was making a road around a sink hole in a cranberry marsh, 84 rods being cleared, stumped, graded and surfaced with sand and 7 cedar culverts put in.

Franklin Township, Road on the Southern Peninsula.—A new road ½ mile in length along the lake shore of Lake-of-Bays was cut out, stumped, graded and put in shape for travel. A bridge 50 ft. long, 12 ft. wide, with substantial railing, and 2 wooden culverts were built. A rock wall 250 ft. long was built along sliding place to hold a fill.

Gurd Township, between Cons. 2 *and* 3, *across Lots* 19 *to* 29.—Two and one-half miles of old road were side-brushed, graded and surfaced with gravel and 3 cedar culverts built.

Gurd Township, between Cons. 2 *and* 3, *across Lots* 19 *to* 29.—Two and one-quarter miles of old road were improved by grading and gravelling 2 miles and building 10 ceder culverts.

Himsworth North Township, between Cons. 24 *and* 25 *and on Cons.* 26 *and* 27, *across Lots* 11 *to* 20.—A new road ¾ miles in length was cleared, stumped, graded, ditched, surfaced with earth and 2 cedar culverts built.

Himsworth North Township, on Con. 22, *across parts of Lots* 12 *and* 13.—A low, swampy road was improved by clearing, grading and surfacing with gravel ½ mile and building 1 cedar culvert.

Himsworth South Township, between Cons. 2 *and* 3, *Lot* 13.—A fill 10 ft. in depth and 18 rods in length was made with stone and covered with gravel to lessen the grade on a bad hill.

Humphrey Township, Alexander's Hill, Parry Sound Road.—A new road through a stumpy piece of land was cleared, stumped, graded and surfaced with earth 200 rods and 3 cedar culverts built.

Lindsay Township, Bury Road.—A new road was constructed by grading 25 rods, surfacing with earth and gravel 255 rods and making a stone fill of 57 yds.

Lount Township, between Cons. 12 *and* 13, *Lots* 4 *and* 5.—A new road ¾ miles in length was cleared, stumped, graded and surfaced with earth and 1 cedar bridge and 2 cedar culverts built.

Lount Township, continuation of the road between Cons. 1 *and* 2—One and one-half miles of new road were cleared, stumped, grubbed and graded and 7 cedar culverts built.

Machar and Gurd Townships, between Lots 25 *and* 26, *across Con.* 14, *Machar, and between Lots* 10 *and* 11, *across Cons.* 1 *and* 2, *Gurd.*—A new road ¾ miles in length was cleared, stumped, graded and surfaced with earth, 1 cedar bridge and 3 cedar culverts built. Part of this road was over a Beaver meadow.

MacKenzie and Burton Townships, the Whitestone Valley Road from the Whitestone Bridge to the North Road.—Two and one-half miles of old road were side-brushed, graded and surfaced with earth and 13 cedar culverts built.

Matchedash Township Roads.—This road was improved 95 rods by brushing 6 ft. on each side and surfacing with earth.

McKellar and McDougall Townships, on the road between Waubamic Station and McKellar.—One-half mile of old road was surfaced with gravel and 3 wooden culverts built.

Medonte Township Roads.—One hundred rods of old road were improved by grading 52 rods, gravelling 83 rods, making a stone fill of 35 yds., and an earth cut and fill of 50 yds. This work was between lots 20 and 21, across Cons. 12 to 14 inclusive. The township was assisted in the building of a bridge on Con. 10, between lots 5 and 6, by having the foundation for the abutments prepared, and also by having the gravel and cement hauled for the bridge. The old bridge was washed out last Spring. The road on Con. 5, across lots 21 and 22, was improved 120 rods by grading 50 rods, surfacing with gravel 40 rods and surfacing with earth 80 rods.

Medora Township, between Lots 30 *and* 31, *Cons.* 5 *and* 6.—One-half mile of old road was improved by being graded, cleaning out the ditches, hauling and placing 325 loads of gravel and earth on it.

Mills Township, from Lots 25 *to* 14 *on the Stage Road.*—Two miles of old road were graded, put in good shape with clay and sand and 10 cedar culverts and 1 cedar bridge built.

Monteith Township, from Lot 33, *Con.* 11, *to Lot* 24, *Con. B, on the Seguin Falls and Orrville Road.*—This road was improved by side-brushing, grading and surfacing with gravel ¾ miles, building 4 cedar culverts and 1 cedar bridge.

Monteith and McMurrich Townships, the Monteith and Perry Road from the east boundary of Monteith to the Village of Sprucedale.—The work on this road was done by two overseers. One overseer side-brushed 1 mile, graded and surfaced with gravel 1½ miles and built 1 stone culvert; the other overseer side-brushed and graded 2¾ miles, built 7 plank culverts, spread 113 yds. of gravel and rounded up the remainder of the road with clay and sand.

Orillia Township Roads.—The road from lots 1 to 10 on Con. 4 was gravelled 148 rods, the gravel being hauled a long distance. The road between lots 15 and 16, across Con. 4, was surfaced with broken stone and clay 70 yds., and a stone fill of 80 yds. put in over black muck and covered with clay. The north townline was improved ¾ miles by surfacing ½ mile with earth and making an earth fill of 400 yds.

Pringle Township, the Great North Road between Golden Valley and Commanda.—Twelve miles of this road were repaired at necessary points by spreading gravel, building 3 cedar culverts and grading 3 miles.

Pringle and Mills Townships, Stage Road on the 8th and 9th Cons., Lots 7 to 1 in Pringle.—One and one-half miles were graded, surfaced with earth and gravel, 12 wooden and 4 stone culverts built.

Sinclair Township from Lot 14, Con. 6, from Lot 9 to Con. 8.—General repairs were made extending over ¾ miles by side-brushing the road, grading 60 rods on a hill, surfacing 30 rods with earth and building 2 wooden culverts.

Stisted Township, Hood Road, Cons. 8 to 12.—Three miles of old road were improved by being side-brushed, graded, surfaced with earth and building 6 wooden culverts. The sides of the road were ploughed and ditched, and the centre of the road graded with a wheel grader.

Strong Township, 10th Con., Pinkerton's Hill.—One-half mile of new road was cleared, stumped, graded and surfaced with earth and 3 cedar culverts built.

Strong Township, 10th Sideroad, Cons. 12 and 13.—One and one-quarter miles of new road which was started last year was graded and gravelled, and had 2 wooden culverts put in on it. The gravel had to be hauled a long distance.

St. Edmund's Township, the Bury Road.—One and one-half miles of old road were improved by surfacing with earth and gravel 300 rods, and making a stone fill of 141 yds.

Tay Township Roads.—The road across Con. 10, lots 5 and 6, was surfaced with gravel 70 rods. The road between lots 10 and 11, across Con. 5, was improved 15 rods by making a cut 135 yds., and a fill of 135 yds. on a steep hill. Lot 6, Con. 9, at an iron culvert in a deep ravine, an earth cut and fill of 170 yds. was made, thus improving 10 rods of road.

Tiny Township, opposite Lots 85 and 90, Con. 2.—One and one-half miles of old road were improved by being graded, surfacing 10 rods with gravel and making an earth cut and fill of 2,315 yds. on a very bad clay hill.

Vespra and Sunnidale Townline.—A new road 125 rods in length through a swamp was cleared, stumped and grubbed.

Wilson Township, Loring-Salines Road.—General repairs were made on 4½ miles of this road by being side-brushed, removing stumps and grubbing 2½ miles, removing boulders and building 8 cedar culverts.

Wood Township, road between Bala and the Village of Sahanatien.—Four miles of old road were improved by removing stones, brushing out 500 rods, grading 500 rods, spreading 250 loads of earth, building 4 wooden culverts and making a deviation 10 rods in length around a bald rock.

REPAIRS AND MAINTENANCE.

Cardwell Township, Bracebridge and Parry Sound Road, Lot 33, Con. 5.—A new road, being a deviation around bad hills, was cleared, stumped, graded, surfaced with earth and gravel and ditched 1 mile 30 rods, 14 culverts and a wooden bridge were put in, and 2 side-hill cuts made, and a fill of 180 cu. yds. Considerable blasting was done on this work and a very good road has been made.

Lindsay Township, East Stage Road.—One and one-quarter miles of old road were improved by side-brushing 20 rods, grading 43 rods, surfacing with gravel 135 rods, and crowning 20 rods with broken stone.

Wallbridge Township, Byng Inlet Road.—Two miles of old road were improved by grading 2 miles, surfacing with earth and gravel 2 miles, building 3 plank culverts and repairing 3 wooden bridges. Only 140 yds. of gravel were put on the road, the rest of the surfacing being sand.

WEST DIVISION BY-LAWS.

Albermarle By-law No. 542.—Road No. 1, Con. 4, W.B.R., lots 12 to 15, 116 rods of old road were graded and gravelled. Road No. 2, Con. 1, lot 13, W.B.R., 100 rods of old road were graded and 166 rods surfaced with gravel. Road No. 3, between Cons. 2 and 3, E.B.R., lot 15, 100 rods of old road were graded and 94 rods of it surfaced with gravel. Road No. 4, between Cons. 2 and 3, E.B.R., lot 24, 103 rods of old road were surfaced with gravel. Road No. 5, from the 3rd Con., E.B.R., to the Bury Road, ½ mile of old road was graded and 60 rods surfaced with gravel. Road No. 6, from Pattanella Bridge to Con. 8, E.B.R., 180 rods of old road were graded and gravelled. Road No. 7, on the south townline, 119 rods of old road were surfaced with gravel. Road No. 8, between Cons. 8 and 9, E.B.R., lot 2, 200 rods of old road were graded and 117 rods surfaced with gravel. Road No. 9, between Cons. 6 and 7, E.B.R., from the north townline 200 rods of old road were graded and 150 rods surfaced with gravel. Road No. 10, from the 25th sideroad to Colpoy's Bay, ¾ miles of old road were improved by grading 130 rods and gravelling 150 rods.

Amabel By-law No. 174.—Road No. 1, from the 5th sideroad west, ½ mile of old road was graded and 150 rods of it surfaced with gravel. Road No. 3, between Cons. 2 and 3, lots 10 to 15, 175 rods of old road were improved by being graded, gravelling 45 rods and putting in 1 concrete culvert. Road No. 4, the boundary of Amabel and Keppel, between 1 N.C.D. and 2 N.C.D., 70 rods of old road were improved by grading 60 rods and gravelling 70 rods, also making a stone fill of 32 yds. Road No. 6, 15th sideroad south of Con. 2, 10 rods were graded and 70 rods surfaced with gravel. Road No. 7, on D line between the 2nd and 3rd Cons., 35 rods were gravelled, 1 concrete culvert put in and a stone fill of 66 yds. made. Road No. 9, on Con. 8, east of the 15th sideroad, 70 rods were gravelled. Road No. 10, on Con. 10, west from Hepworth, 70 rods were graded and gravelled. Road No. 12, on the 15th sideroad, between Con. 12 and 2 N.C.D., 70 rods were gravelled and a stone fill of 36 yds made. Road No. 13, on 1 S.C.D., from the 5th to the 15th sideroad, 30 rods were graded and 70 rods gravelled. Road No. 16, Oliphant Road west of the 5th sideroad, 80 rods were surfaced with gravel.

Cardwell By-law No. 171.—Road No. 1, across Con. B., lots 61, 62 and 63, 1½ miles of old road were improved by side-brushing 40 rods, grading 300 rods, surfacing with gravel 200 rods, and building 4 wooden culverts.

Chapman By-law No. 6.—Road No. 1, from lot 86, Cons. A and B northerly, 6¾ miles of old road were graded and gravelled. Road No. 2, from lot 26, between Cons. 8 and 9 east, 7½ miles of old road were graded and gravelled. Road No. 3, from lot 97, Con. A, easterly, 6 miles of old road were graded and 14 miles of gravel spread.

Derby By-law No. 12.—Road No. 1, between Cons. 4 and 5, lots 10, 11 and 12, 200 rods of old road were surfaced with gravel. Road No. 2, between lots 12 and 13 across Cons. 2, 3 and 4, 200 rods of old road were improved by grading and crowning with broken stone ½ mile, putting in 3 concrete culverts and making a rock fill of 611 yds., and a stone fill of 162 yds. Road No. 3, between lots 13 and 14 across Con. 2, 150 rods of old road were graded and 100 rods gravelled. Road No. 5, between lots 9 and 10 across Cons. 5 to 8, 120 rods were graded and gravelled. Road No. 6, between Cons. 1 and 2, lots 10, 11 and 12, ¾ miles of old road were gravelled. Road No. 7, the north gravel road across Cons. 3, 4 and 5 was

improved 1¼ miles by grading 170 rods, gravelling 220 rods and crowning with broken stone 120 rods.

Eastnor By-law No. 2.—Road No. 1, between Cons. 2 and 3, lot 3, 1 wooden culvert. Road No. 2, Con. 3, on the 5th sideroad to the creek, 107 rods of new ditch were made. Road No. 4, on Con. 1, from lots 1 to 5, 150 rods were gravelled and 50 rods ditched. Road No. 4A on the west Government Road from lot 30, 60 rods were graded, 105 rods gravelled and 1 wooden culvert built. Road No. 5, on 25th sideroad across Cons. 1 and 2, 60 rods were gravelled and 115 rods ditched. Road No. 6, on the 25th sideroad between Cons. 2 and 4, 14 rods were graded and 100 rods were gravelled. Road No. 7, East Shore Road, lots 35 to 40, 100 rods were graded and 110 rods surfaced with gravel. Road No. 8, between Cons. 8 and 9, lots 8 to 12, 115 rods were graded and 125 rods gravelled. Road No. 9, from lot 18 to the 20th sideroad, 80 rods were graded, 100 rods gravelled and 25 rods ditched. Road No. 10, from lot 5 to the 15th sideline, 75 rods were graded and 115 rods gravelled.

Keppel By-law No. 8.—Road No. 1, between Cons. 19 and 20, from lots 12 to 24, 30 rods of old road were improved by crowning 6 rods with broken stone, making a stone fill of 60 yds., and putting in 1 concrete culvert. Road No. 2, across Cons. 8 to 11, lots 31 to 26, 40 rods were graded and 116 rods crowned with broken stone. Road No. 3, lots 14 to 20, Con. 17, 92 rods were crowned with broken stone. Road No. 4, Cons. 16 to 21, Keppel and Amabel boundary, 180 rods were graded, 204 rods crowned with broken stone and 50 rods ditched. Road No. 5, between Cons. 3 and 4, lots 11 to 18, 105 rods were crowned with broken stone. Road No. 7, across lots 14 to 20, 2 I.C.D., 3 miles of old road were improved by being graded, making an earth cut and fill of 15 yds., and crowning 10 yds. with broken stone. Road No. 8, between Cons. 1 S.C.D. and 1 N.C.D., lots 1 to 10, 206 rods were graded and 80 rods crowned with broken stone. Road No. 9, across lots 23 to 30, 2 S.C.D., 90 rods were graded and 85 rods crowned with broken stone. Road No. 10, between Con. 13 and 14, across lots 20 to 25, ½ mile was graded and 20 rods crowned with broken stone. Road No. 11, from Shallow Lake across Con. 2 S.C.D., 220 rods were side-brushed, 15 ft. on each side, and 118 rods crowned with broken stone. Road No. 12, between lots 25 and 26, Cons. 12 to 16, 210 rods were graded and 132 rods crowned with broken stone. Road No. 13, between Cons. 15 and 16, lots 2 to 20, 40 rods were side-brushed and 110 rods surfaced with gravel. Road No. 14, between Cons. 21 and 22, lots 5 to 15, 70 rods were crowned with broken stone and 2 concrete culverts built. Road No. 15, between Cons. 3 and 24, lots 18 to 24, 90 rods were graded and crowned with broken stone. Road No. 16, between lots 25 and 26 across Cons. 17 and 18, 100 rods were crowned with broken stone. Road No. 17, between Cons. 19 and 20 across lots 34 and 35, 96 rods were crowned with broken stone. Road No. 18, between lots 25 and 26 across Cons. 23 and 22, 94 rods were crowned with broken stone. Road No. 19, between Cons. 23 and 24 across lots 29 and 30, 130 rods were crowned with broken stone. Road No. 20, between lots 40 and 41 across Cons. 20, 21 and 22, 184 rods were crowned with broken stone. Road No. 21, boundary of Keppel and Amabel, across Cons. 6, 7 and 8, 90 rods were crowned with broken stone. Road No. 22, boundary of Keppel and Sarawak, lots 36 to 41, 150 rods were graded and 170 rods crowned with broken stone.

Lindsay By-law No. 238.—Road No. 1, between Cons. 4 and 5, E.B.R., lots 1 to 15, 1 mile of old road was improved by grading 135 rods, gravelling 220 rods and building a wooden culvert. Road No. 2, between Cons. 4 and 5, E.B.R., lots

15 to 35, 65 rods were graded, 127 rods gravelled and 28 rods ditched. Road No. 3, between Cons. 2 and 3, W.B.R., lots 1 to 15, 75 rods were graded and 105 rods surfaced with gravel. Road No. 6, 35th sideroad from Con. 1, W.B.R., to the Georgian Bay, 250 rods were surfaced with gravel. Road No. 8, 5th sideroad, Cons. 2 to 5, W.B.R., 13 rods were graded and 63 rods gravelled. Road No. 9, Con. 1, E.B.R., lots 1 to 10, 12 rods were graded and 64 rods were gravelled. Road No. 10, Cons. 2 and 3, E.B.R., lots 1 to 10, 45 rods were graded and 60 rods gravelled.

Machar By-law No. 511.—Road No. 1, between Cons. 4 and 5, lots 12 to 24, 225 rods were graded and 30 rods gravelled. Road No. 2, between lots 5 and 6 across Cons. 5 and 6, 250 rods were graded. Road No. 3, from lot 16, Con. 6 to lot 30, Con. 8, 250 rods were graded and 20 rods gravelled.

Matchedash By-law No. 178.—Road No. 2, between lots 6 and 7, Con. 6, a new timber bridge having a span of 50 ft., and 16 ft. wide, was built. Road No. 5, between lots 5 and 6 across Con. 2, ½ mile of old road was improved by being graded and gravelling 70 rods.

Medonte By-law No. 536.—Road No. 1, between Cons. 6 and 7, lots 21 to 24, 30 rods of old road were improved by grading 10 rods and making an earth cut and fill of 300 yds. Road No. 2, between lots 20 and 21, across Con. 3, 125 rods of old road were improved by grading 115 rods, building 1 wooden culvert and making an earth cut and fill of 200 yds. Road No. 4, on Con. 13, lots 13 to 15, 125 rods of old road were graded and gravelled. Road No. 5, on Con. 8, lots 13 to 22, 300 rods of old road were improved by grading 260 rods, gravelling 85 rods, building 1 wooden culvert and making an earth cut and fill of 150 yds. Road No. 7, on Con. 6, lots 1 to 12, 75 rods were surfaced with gravel, 10 rods with clay and 1 concrete culvert put in. Road No. 9, between lots 10 and 11, Cons. 2 to 6, 2 miles of old road were graded, 70 rods gravelled, 1 wooden culvert built and an earth cut and fill of 53 yds. made. Road No. 10, between lots 5 and 6, across Cons. 7 to 14, 40 rods of old road were improved by clearing 30 rods, gravelling 20 rods and making a stone fill of 110 yds. Road No. 11, between lots 10 and 11, Cons. 7 to 14, 110 rods of old road were graded and 54 rods of it surfaced with gravel.

Medora and Wood By-law No. 302.—Road No. 1, between Con. 14 and the townline from lot 25, 5 miles of old road were improved by clearing 1 mile 180 rods, grading 4 miles 220 rods, surfacing with earth 3 miles 40 rods and building 6 wooden culverts. Road No. 2, from lot 10, Con. 3 to Con. 14, 5 miles of old road were improved by being side-brushed, grading 2 miles, spreading 381 loads of gravel, building 12 wooden culverts and blasting out 30 yds. of rock. Road No. 3, Medora and Port Carling Road, 6 miles of old road were improved by clearing 3 miles 40 rods, grading 5 miles, spreading 302 loads of gravel and building 3 wooden culverts. Road No. 4, from the town of Bala, lot 30, south to Wood and Muskoka boundary, 5 miles of old road were improved by clearing 1 mile, grading 100 rods, spreading 435 loads of gravel 1 load deep, building 5 wooden culverts and 1 wooden bridge.

Monck By-law No. 428.—Road No. 1, the Lake Shore Road, 10 miles of this road were improved by grading 8 miles, gravelling 1½ miles, cutting down several hills and building 12 culverts. Road No. 2, from Watt townline, lot 25, Con. 13, by way of Bardsville and Falkenburg to Bracebridge, ½ mile of new road was cleared, stumped, graded and surfaced with gravel and 5 wooden culverts built. Also 5 miles of old road were graded and gravelled with 175 loads of gravel and 2 stone culverts put in. Road No. 3, Con. 8, lots 8 to 10, ½ mile of old road was graded, 40 rods gravelled and a 14-ft. bridge built having stone abutments and cedar top.

Muskoka By-law No. 276.—Road No. 1, Doe Lake Road, from lot 1, west, 3 miles of old road were improved by removing pine stumps, grading 1¼ miles, spreading 66 loads of gravel and 168 loads of earth, building 4 wooden culverts and making an earth fill of 50 yds. Road No. 2, River Road from lot 1, west, 4 miles of old road were improved by grading 300 rods, spreading 71 loads of gravel and building 1 wooden culvert. Road No. 3, Reay Road from lot 1, west, 3 miles of old road were improved by grading 1 mile 120 rods, spreading 81 loads of gravel and building 3 wooden culverts. Road No. 4, Musquosh and Long Point Roads, 11 miles of old road were improved by clearing 290 rods, removing pine stumps, grading 190 rods, spreading 50 loads of earth and building 15 wooden culverts. Road No. 5, Muldrew Lake Road from Gravenhurst, west, 5 miles of old road were improved by clearing 20 rods, stumping and grubbing 12 rods, grading 130 rods, spreading 40 loads of earth, putting in 2 cement and 5 wooden culverts. Road No. 6, Bracebridge Road from Muskoka River, south, 3 miles of old road were improved by being graded, spreading 113 loads of gravel and repairing 4 wooden culverts. Road No. 7, Lake Shore Road from Thomas Stephen's Corners, 8 miles of old road were improved by grading 3½ miles, spreading 136 loads of gravel and building 1 wooden culvert.

Oro By-law No. 432.—Road No. 1, between Cons. 12 and 13, lots 1 to 6, 1¾ miles of new road were completed by surfacing 1¾ miles with earth, 1 mile with broken stone, making an earth cut of 1,300 cu. yds. and 40 rods of old road were surfaced with gravel.

Orillia By-law No. 928.—Road No. 1, Division Line across Cons. 1 to 8, 1 mile of old road was improved by removing stones from 30 rods, grading 268 rods, gravelling 220 rods, putting in 1 stone culvert and making an earth cut and fill of 225 yds. Road No. 2, between lots 5 and 6, across Cons. 1 to 4, 1 mile of old road was improved by grading 140 rods, surfacing 305 rods with gravel. Road No. 4, Barrie Road, across Cons. 3 and 4, ½ mile of old road was improved by grading 115 rods, gravelling 140 rods, making a stone fill of 20 yds. Road No. 7, between lots 5 and 6, across Cons. 1 and 2, North Orillia, 230 rods of old road were graded and gravelled, 150 rods of it side-brushed, 1 concrete culvert put in and a stone fill of 50 yds. made. Road No. 10, Con. 2, lots 10 to 24, North Orillia, 180 rods were surfaced with gravel. Road No. 11, Con. 3, lots 1 to 24, North Orillia, 175 rods of old road were improved by grading 35 rods, gravelling 140 rods, building 1 wooden culvert and making a stone fill of 30 yds. Road No. 13, Con. 6, lots 1 to 24, North Orillia, 1 mile of old road was improved by grading 200 rods, crowning ½ mile with broken stone and building 1 concrete and 1 wooden culvert. Road No. 18, Con. 11, lots 5 to 15, North Orillia, 1½ miles of old road were improved by grading 1¼ miles and crowning 210 rods with broken stone. Road No. 20, Con. 13, lots 8 to 16, North Orillia, 30 rods were stumped and grubbed, 120 rods graded, 2 wooden culverts built and an earth cut of 130 yds. and a fill of 1,300 yds. made.

Sarawak By-law No. 7.—Road No. 1, between Cons. 1 and 2, from lots 1 to 9, 110 rods of old road were improved by gravelling 60 rods and crowning 50 rods with broken stone. Road No. 3, between lots 6 and 7, across Con. 2, 110 rods of old road were improved by grading 60 rods, crowning 50 rods with broken stone and ditching 80 rods. Road No. 5, between Cons. 2 and 3, from lots 10 to 22, 95 rods of old road were graded and crowned with broken stone. Road No. 8, between Cons. 2 and 3, lots 22 to 38, 121 rods of old road were crowned with broken stone.

St. Edmunds By-law No. 182.—Road No. 1, between Cons 2 and 3, lots 48 to

50, 1½ miles of old road were improved by side-brushing 90 rods, grading 70 rods, gravelling 300 rods, building 5 wooden culverts and making a stone fill of 250 yds.

Stisted By-law No. 218.—Road No. 1, from lot 25, Con. 4, to lot 24, Con. 7, 3 miles of old road were improved by clearing 200 rods, grading 2½ miles, gravelling 290 rods, building 6 wooden culverts. Road No. 2, lot 21, Con. 2 to lot 18, Con. 2, and on the sideline 20 and 21, 1½ miles of old road were improved by clearing 300 rods, grading 1¼ miles, gravelling 156 rods and building 3 wooden culverts.

Sydenham By-law No. 20.—Road No. 1, between Cons. 2 and 3, across lots 7 and 8, 56 rods of old road were crowned with broken stone. Road No. 2, between lots 9 and 10, across Cons. 2 to 9, ¾ miles of old road were improved by grading 153 rods, gravelling 78 rods and crowning 179 rods with broken stone. Road No. 3, between lots 12 and 13, Con. 11, 22 rods were graded and 122 rods crowned with broken stone. Road No. 4, Centre Road from lot 1, townline St. Vincent to Owen Sound, 4 miles of old road were improved by grading 1 mile 253 rods, crowning with broken stone 1 mile 192 rods and ditching 25 rods. Road No. 5, between lots 24 and 25, Cons. 2 to 6, 1 mile of old road was improved by grading 230 rods and crowning 210 rods with broken stone. Road No. 6, Cons. B and C, from lots 35 to 41, 1 mile of old road was improved by grading 195 rods and crowning 205 rods with broken stone.

Tay By-law No. 638.—Road No. 3, between Cons. 4 and 5, lots 1 to 13, 100 rods of old road were improved by grading 50 rods, surfacing 70 rods with gravel and 30 rods with clay. Road No. 4, between Cons. 5 and 6, lots 1 to 14, 80 rods were graded and 100 rods gravelled. Road No. 11, between lots 10 and 11 and Severn Road, Cons. 12, 13 and 14, 82 rods of old road were improved by grading 20 rods, gravelling 60 rods, building 1 wooden culvert and making 100 rods of ditches. Road No. 15, Con. 5, lots 15 and 16, 80 rods of old road were improved by gravelling 75 rods, putting in 2 iron culverts and making an earth fill 130 yds. Road No. 16, between Cons. 5 and 6, lots 1 to 13, 20 rods were surfaced with clay and ditched and an earth cut and fill of 205 yds. made. Road No. 17, between Cons. 7 and 8, from lots 1 to 13, 125 rods were surfaced with gravel after 65 rods of it had been graded. Road No. 20, Tay and Matchedash boundary, lots 8 to 14, 60 rods of new road were opened up by stumping and grubbing 30 rods, building 2 wooden culverts and ditching 30 rods. Road No. 22, Tay and Tiny boundary, lot 84, 100 rods were improved by grading 67 rods and gravelling 70 rods.

Tiny By-law No. 551.—Road No. 1, Penetang Road, lots 86 to 88, 120 rods were graded and 110 rods surfaced with gravel. Road No. 2, Cons. 1 and 2, old survey, lots 85 to 87, 72 rods were graded and gravelled and an earth fill of 30 yds. made. Road No. 3, Penetang Road from lots 102 to 105, 1 mile of old road was improved by grading 33 rods and gravelling 290 rods. Road No. 4, Penetang Road, from lots 106 to 110, 1 mile was improved by grading 297 rods, gravelling 40 rods and surfacing with clay 230 rods. Road No. 5, North West Basin Road, 190 rods were surfaced with gravel and 1 concrete culvert put in. Road No. 6, between lots 13 and 14, Con. 16, and between Cons. 16 and 17, lots 14 and 15, 1¾ miles of old road were improved by grading 1 mile 180 rods, gravelling 290 rods and building 1 wooden culvert.

Vespra By-law No. 581.—Road No. 1, between Cons. 1 and 2 north from the townline, ½ mile of old road was improved by being graded, gravelling 100 rods and building 1 wooden culvert. Road No. 2, between Cons. 3 and 4, lots 1 to 8, 175 rods were graded and 125 rods of it surfaced with gravel. Road No. 3,

Sunnidale Road, 1 mile was improved by grading 300 rods and gravelling ¾ miles. Road No. 5, between Cons. 3 and 4, from lots 14 to 18, 1¼ miles of old road were improved by grading and gravelling 60 rods and surfacing 300 rods with clay. Road No. 7, between Cons. 6 and 7, lots 4 to 10, 1 mile of old road was improved by stumping and grubbing ¾ miles, grading 23 rods and ditching 200 rods. Road No. 8, between Cons. 7 and 8, from lot 7 north, 230 rods were improved by grading 20 rods, gravelling 50 rods and surfacing 180 rods with earth. Road No. 9, between Cons. 9 and 10, lots 8 to 15, 120 rods of old road were graded, 140 rods ditched and a stone fill of 20 yds. Road No. 10, between Cons. 9 and 10, from lot 20 south, 100 rods of old road were surfaced with gravel. Road No. 12, between Cons. 8 and 9, lot 3, 10 rods of old road were improved by building a wooden bridge having a span of 23 ft. and making a stone fill of 50 cu. yds.

Watt By-law No. 488.—Road No. 4, Port Carling Road, lots 25 to 35, Cons. 1 and 2, 1¾ miles of old road were improved by grading 200 rods, gravelling 170 rods, building 4 wooden culverts and repairing 20 culverts. Road No. 5, Lake Shore Road, ¼ mile of old road was improved by being graded and surfaced with 70 loads of earth and 50 loads of gravel, building 3 wooden culverts and making a rock cut on the hill of 107 cu. yds.

East Division.

Admaston Township Roads.—Phelan Settlement Road, lots 18 and 19, Con. 9, ¼ mile was improved along the lake shore by grading 40 rods, surfacing with gravel 80 rods and repairing 2 wooden culverts. Road between Cons. 7 and 8, across lots 7 and 8, was improved by grading and surfacing 120 rods, removing stone and building 1 cedar culvert. Ashdad Road, lots 5 to 7, Con. 11, was improved ½ mile by filling up bad holes with stone, grading ½ mile and surfacing it with clay and gravel and building 4 cedar culverts. The road on Con. 5, across lots 16 and 17, was improved hauling clay and spreading gravel on 80 rods.

Airy Township Roads.—Con. 7, across lots 2, 3 and 4, ½ mile of old road was improved by gravelling 70 rods and building 1 wooden culvert. Con. 5, lots 7 and 8, ½ mile of old road was improved by filling a gulley with stones and gravel, side-brushing and grading 148 rods and building 9 plank culverts. Cons. 12 and 13, lots 20, 21 and 22, a new road through good land but very heavy bush was cleared, stumped and grubbed 1 mile 40 rods in length, 40 rods of it graded and 3 wooden culverts built. Between lots 15 and 16, across Con. 4, ½ mile of new road through gravel land and very stony was opened up by clearing and grading 150 rods, gravelling 20 rods and building 2 wooden culverts.

Alice Township Roads.—The Davis Mill Road, lots 18 and 20, Con. 8, was improved by removing stones and stumps, grading and surfacing with clay 80 rods. Across lots 4 and 5, Con. 16, 120 rods of old road were graded and surfaced with earth and several boulders removed. The Shady Nook Road, lots 16 and 17, Range A, was improved by filling in gravel in bad holes, building 7 cedar culverts, grading and gravelling 104 rods.

Anson and Hinden Township Roads.—The Bobcaygeon Road was improved 6 miles by re-surfacing with gravelly soil, filling ruts with small stone and cleaning out the side ditches.

Bagot and Blythfield Township Roads.—High Falls Road, lots 2 to 22, on Con. 1, 80 rods of old road were graded and gravelled. Calabogie Road, lots 13 to 15, Con. 9, 80 rods of old road were graded and gravelled. Road on lots 7 and 8, Con. 11, 80 rods were graded and surfaced with earth. Pultz Hill, lot 4, Con. 2,

a hill was improved by removing stone, grading and gravelling 40 rods. Ashdad and Mount St. Patrick Road, lots 29 and 30, Con. 11, ½ mile was graded and surfaced with gravel.

Bancroft and Hermon Road.—East Hastings Road in Dungannon, lots 59 to 62, was improved by side-brushing, grading and gravelling 80 rods, building 1 stone culvert and providing drainage.

Bancroft Municipality Roads.—A piece of swamp road from the station to Main St. was drained and put in good shape by grading and gravelling 80 rods, building 1 cedar culvert and making a stone fill of 200 yds.

Barrie Township, Cloyne and Masseneau Road.—Five miles of road from lots 18 to 44, Range B, were improved by grading, gravelling and taking out stone, using best material at hand.

Bastedo Township Roads.—The road on lot 9, Con. 1, was improved by stumping 16 rods, grading ½ mile, making an earth cut of 28 cu. yds. and an earth fill of 100 yds.

Bedford Township from Glendower by Desert Lake to the Kingston and Westport Road.—One-half mile of old road was improved by cutting down a hill and making a stone fill at the bottom, grading 42 rods, gravelling 30 rods and building 1 cedar culvert.

Bedford Township, from Lot 24, Con. 10, to Burridge and Fermoy.—One-half mile of old road was improved by grading 52 rods, gravelling 84 rods and blasting out some stone.

Bedford Township between Bedford Mills and Opinicon Station.—Three-quarter miles of old road were improved by grading 192 rods, gravelling 218 rods and building 5 timber culverts.

Bedford Township, across Lots 23, 24, 25 and 26, on and near the line between Con. 5 and 6.—Forty rods of old road were improved by grading 25 rods and making 2 small hill cuts and fills.

Bedford Mills Road.—On this road ¼ mile was improved by grading 63 rods, gravelling 63 rods and crowning it with broken stone and then rolling it. A very substantial piece of work is now constructed and the township contributed to its cost.

Bexley Township Roads.—The road on the north bay of Balsam Bay was improved 155 rods by side-brushing 60 rods 16 ft. on each side, grading 30 rods and gravelling 45 rods.

Bonfield Township Roads.—Between lots 15 and 16, across Con. 10, 80 rods of new road were cleared, stumped and graded and 2 wooden culverts built. Between lots 5 and 6, across Con. 7, a big boulder hill was cut down and fixed up by side-brushing 50 rods, grading 40 rods and gravelling 20 rods. Bonfield and Boulter boundary, lots 24 and 25, a new road ¼ mile in length through light and hilly land was opened up by clearing, stumping and grading 60 rods and building 1 wooden culvert. Between Cons. 10 and 11, across lots 6, 7 and 8, a new road ¾ miles in length across level land was constructed by clearing and grading 135 rods, gravelling 40 rods and building 1 wooden culvert. Tallow Hill Road, lot 28, Con. 12, was improved ¾ miles by side-brushing and grading 200 rods and building 2 wooden culverts. Between lots 30 and 31, across Con. 5, ¾ miles of old road were improved by side-brushing, stumping and grading 180 rods, building 1 wooden culvert and laying 5 rods of corduroy. Bissett Road, lots 24 and 25, Con. 2, was improved ¾ miles by side-brushing 150 rods, grading 150 rods, gravelling 20 rods and building 3 wooden culverts.

Bromley Township Roads.—Douglas and Caldwell Station Road, from lot 9,

S.B.R. to lot 2, Con. 8, ¾ miles of old road were graded and 24 rods crowned with broken stone. Across lots 15 and 16, on Con. 7, 80 rods of old road, which had been corduroyed, was covered with gravel.

Brougham Township Roads.—Moore to Graphite Mine Road on Con. 3, across lots 25 to 27, was improved 1 mile by removing stone, making general repairs, grading and surfacing 1 mile. Maloney Mountain Road, from lots 4 to 6, on Con. 3, was improved by removing stone, grading and surfacing ½ mile.

Brudenell and Lyndoch Township Roads.—Opeonago Line Road was improved by grading and surfacing 80 rods and building 1 cedar culvert. The townline of Brudenell and Lyndoch, lots 23 and 24, was improved by grading and surfacing with earth 80 rods. From lots 4 to 6, on Con. 16, 1 mile of old road was graded and surfaced with gravel and several boulders removed from the road-bed. The Branch Road, Brudenell, was improved at Brudenell Hill by grading and gravelling 80 rods.

Burleigh Township Roads.—The Burleigh Road, lots 15 and 16, Con. 6, was improved by grading and crowning with crushed stone 190 rods and blasting the top off a hill.

Calvin Township Roads.—Between lots 30 and 31, across Con. 1, ¾ miles of old road were improved by clearing and grading ½ mile, gravelling 50 rods and building 2 wooden culverts. Between lots 15 and 16, across Cons. 5 and 6, 1 mile of old road was side-brushed and gravelled. On Con. 2, from lots 9 to 13, ½ mile of old road was cleared and graded, 50 rods gravelled and 1 wooden culvert built. Between lots 10 and 11, across Cons. 5 and 6, ¾ miles of old road were improved by clearing and grading 200 rods, gravelling 20 rods and building 2 wooden culverts. Between lots 5 and 6, across Con. 3, ¾ miles of old road were improved by clearing and grading 200 rods, gravelling 20 rods, building 2 wooden culverts. Between lots 10 and 11, across Cons. 3 and 4, ½ mile of old road was improved by clearing and grading 110 rods, gravelling 20 rods and building 1 wooden culvert. Lot 35, Con. 6, ¾ miles of old road were improved by clearing and grading 150 rods, gravelling 20 rods and building 2 wooden culverts. The boundary line of Papineau and Calvin from Con. 2 north, being through swampy land, was improved by clearing and grading 80 rods and gravelling 50 rods. On Con. 2, from lots 6 to 9, 1 mile of old road was side-brushed and graded and 6 wooden culverts built.

Cameron Township Roads.—Between lots 30 and 31, Range B, ½ mile of new road through rough land, low and hilly, was opened up by clearing ½ mile, stumping and grubbing 100 rods and surfacing with gravel 60 rods. On Con. 24, across lot 4, ½ mile of old road was improved by side-brushing 40 rods, gravelling 80 rods and building 1 wooden culvert.

Carden Township Roads.—The Mud Lake Road to the boundary of Mara, lots 17 and 18, Con. 1, was surfaced with gravel 80 rods. First Quarter Line was improved 97 rods by blasting out side ditches through rock, removing pine stumps, grading 90 rods and gravelling 70 rods.

Cardiff Township Roads.—The Deer Lake Road from Hiland Grove Post Office to the railway crossing at Harcourt was improved by removing boulders, surfacing with earth 3½ miles, spreading a small amount of gravel and building 1 cedar culvert.

Carlow Township Roads.—The road across lots 18 and 19, on Con. 1, was graded and gravelled 80 rods, a large quantity of boulders were removed, ditches blasted out of rock and 1 cedar culvert built. Across lots 10 to 12, on Con. 13, 40 rods were side-brushed and graded and 4 cedar culverts built.

Casimir Township Roads.—A new road 40 rods in length was opened up by clearing 12 rods, stumping and grubbing 5 rods, ditching 24 rods and building 1 cedar culvert.

Chandos Township Roads.—Lots 13 and 14, Con. 10, 88 rods of old road were improved by surfacing 80 rods with earth and making a crossway 8 rods long, 12 ft. wide, and covering it with earth. The Couch Road, lot 4, Con. 6, was surfaced with earth 46 rods. The Wellington Road, lots 11 to 13, Con. 4, was improved 1 mile by grading 80 rods and removing large stone. The Scott Road west, lots 8 and 9, Con. 12, was improved 63 rods by under-brushing 36 rods and gravelling 63 rods. The Post Road, lots 26 to 29, Con. 3, was improved by under-brushing, logging out and ditching 127 rods and by crowning with earth and broken stone 57 rods.

Charleston Lake Road.—Lot 26, Con. 7, rear of Yonge, 80 cords of stone were placed ready for the crusher.

Chisholm Township Roads.—On lot 25, Con. 7, a new road 80 rods in length was cleared, stumped and graded, 20 rods of it gravelled and 3 wooden culverts put in. Lot 1, Con. 12, 16 rods of new road were cleared, stumped, graded and gravelled, 40 rods ditched and 1 wooden culvert put in. On Con. 4, from lots 2 to 4, 125 rods of new road were cleared, stumped and grubbed, 80 rods graded and 100 rods gravelled and 1 wooden culvert built. On lots 26 and 27, Con. 6, 40 rods of new road were cleared, graded and gravelled and 1 wooden culvert built. On lot 7, Con. 4, a very steep hill was cut down and 40 rods of new road cleared, 20 rods of this being stumped and 20 rods graded. The 25th sideline, Con. 10, was opened up ½ mile by clearing, stumping and grading 108 rods and building 2 wooden culverts. On lot 6, Con. 16, ¼ mile of new road was opened up by clearing and gravelling 60 rods and building 1 wooden culvert. On Con. 16, lot 20, a new road on a very steep hill was constructed ¼ mile in length by clearing, stumping and grubbing 60 rods, grading 40 rods and making an earth fill of 200 yds. On lots 22 and 23, Con. 14, a new road ¼ mile in length was opened up by clearing 60 rods, stumping and grubbing 80 rods, grading 60 rods, ditching 20 rods and building 1 wooden culvert.

Clarendon and Pierna Road.—From lots 10 to 14, south-west range, Clarendon, an old road was improved by side-brushing 144 rods, building 5 cedar and 2 stone culverts, and making a fill of 187 yds. of stone and surfacing it with gravel.

Clarendon, Miller and Ashby Boundary Line.—From lot 29, Con. 6, to lot 42, South-east Range, ½ mile of old road was improved by making a deviation around a hill 22 rods in length, grading 23 rods and surfacing with earth 78 rods.

Cloyne and Kaladar Road.—From lots 10 to 25, Con. 7, Kaladar, 1 mile of old road was improved by side-brushing 38 rods, grading 156 rods, gravelling 287 rods and surfacing with stone 23 rods.

Clyde Hill Road.—Lots 4 to 7, Con. 8, Lanark, ½ mile of the Clyde Hill was graded and gravelled.

Combermere to Centreview.—Lots 17 and 18, Con. 8, Bangor township, was improved ¾ miles by removing stones and stumps, grading, building 3 cedar culverts and a small cedar bridge.

Cordova Mines Road.—Lots 17 and 18, Con. 3, Marmora, gravel was spread on ¾ miles of old road.

Crerar Township Roads.—A new Road between lots 2 and 3, Con. 3, was opened up 80 rods in length by cleaning, stumping and grading and building 1 wooden culvert.

Dalton Township Roads.—The Monck Road from Sebright to the boundary of Rama was improved 1½ miles by filling ruts with small stone and gravel, surfacing several places with gravel and taking off the shoulders with the grader, leaving it in proper shape. The Monck Road, lots 13 to 18 in Con. 3, was improved ½ mile in a similar manner to the above.

Darling and Lanark Road.—The road from lots 24 to 27, Con. 8, was graded and surfaced with gravel ½ mile.

Denbigh Township Roads, Rose Hill Road.—This road was improved 97 rods from lots 3 to 5, Con. 7, by being graded and surfaced and building 1 wooden bridge with stone abutments and approaches on either side filled with stone.

Dummer Township, 9th Line Road.—Gravel was spread on 110 rods of old road across lots 12 and 13.

Dungannon Township Roads.—Vardy Settlement Road, lots 23 and 24, Cons. 15 and 14, was improved by clearing off the sides of the roadway of brush and stones 40 rods, removing large boulders, filling in swamp road with broken stone and covering it with earth, also by building 5 cedar culverts.

Elzevir Township Roads.—Across lots 20 and 21, Con. 5, ½ mile of old road was graded and gravelled and 1 cedar culvert built.

Escott Road.—Crushed stone was placed on 150 rods of road on lots 8 to 10, Con. 5, Escott Township.

Faraday and Herschel Townline.—Across lot 14, the road was improved by cleaning out 4 culverts, grading and widening out 40 rods, clearing out brush through swamp 40 rods and building a small cedar bridge.

Ferris Township Roads.—On Con. 1, from lot 21 west, a new road ½ mile in length was opened up, being cleared, stumped and grubbed. Gravel was spread on 20 rods of it, and 2 wooden culverts built. The road south of Lake Nosbonsing, lots 17 and 16, Con. 2, was improved by side-brushing and grading 80 rods, gravelling 10 rods and building 2 wooden culverts. The road from Nosbonsing to Corbeil, lots 4 and 5, Cons. 7 and 8, being through swampy and rocky land, was improved by side-brushing and grading 50 rods, gravelling 40 rods and building 3 wooden culverts. Between lots 15 and 16, Cons. 10 and 11, ½ mile of old road was side-brushed and graded, 10 rods gravelled and 2 wooden culverts built. Between lots 10 and 11, Con. 5, a big hill was cut down about 3 ft., 50 rods side-brushed and graded, 20 rods gravelled and 2 wooden culverts built. On Con. 1 from Bonfield to Astorville, ¼ mile of old road was improved by clearing and grading 56 rods, gravelling 10 rods and building 2 wooden culverts. The Lake Road, lot 16, Con. 2, was improved ¼ mile by cutting down a hill, blasting out 10 yds. of rock, clearing and grading 40 rods, gravelling 5 rods and building 2 wooden culverts. Between lots 20 and 21, Con. 3, ¼ mile of old road was side-brushed, 20 rods gravelled and 2 wooden culverts placed. Across lots 33 to 35 on Con. 16, ½ mile of old road was improved by clearing 125 rods, grading 75 rods and building 1 wooden culvert. From Astorville to the C.N.R. Station, 60 rods of old road were cleared and graded and 1 wooden culvert built. From Callendar to Nipissing Junction, lots 24 and 25, 100 rods of new road were cleared, stumped and grubbed through clay land. The Corbeil and North Bay Road was improved 1 mile by being surfaced with gravel. The 15th sideline, Trout Lake to Corbeil, was improved 1¾ miles by clearing 50 rods, gravelling 200 rods, building 2 wooden culverts and making general repairs. The road to Ouillette Crossing, lot 21, Con. 2, was improved by grading 60 rods, gravelling 20 rods and building 1 wooden culvert.

Field Township Roads.—The Cache Bay Road was improved 2 miles by general repairs continued northerly 1⅗ miles by chopping, stumping and grubbing 300 rods, grading 1 mile 180 rods, building 15 wooden culverts and 3 new wooden bridges, having a span of 16 ft., and making an earth fill of 140 yards.

Fifth Depot and Tamworth Road.—One-half mile of old road from lots 5 to 7, Con. 10, was improved by side-brushing 37 rods, grading 31 rods, gravelling ½ mile and placing 1 tile culvert.

Fraser Township Roads.—One-half mile of old road was graded and surfaced with earth, and 1 cedar culvert built on lots 10 and 11, Cons. 1 and 2. On lots 5 and 6, Con. 1, a rocky hill was cut down and 80 rods graded and surfaced with earth.

Glamorgan Township Roads.—The Buckhorn Road, from the boundary of Cavendish to the 7th Con., was improved 4½ miles by filling several washouts with small stone and earth, cleaning out side ditches, cutting brush on the sides of the road, surfacing 200 rods with earth and building 3 wooden culverts.

Grattan Township Roads.—The Opeongo Line, lots 45 to 49, S.B.R., was improved by grading 40 rods and surfacing 80 rods with earth. From lots 27 to 29, S.B.R., 80 rods were surfaced with gravel and 1 cedar culvert built. The Donegal Road, lot 27, Cons. 17 and 18, was graded 1 mile and surfaced with gravel ½ mile. The McGrath Road, from lot 22, Con. 15 to lot 24, Con. 16, was improved by filling a low place on the road, grading it and surfacing with broken stone 40 rods.

Griffith and Matawatchan Township Roads.—From lot 34, Con. 4, to lot 29, Con. 8, 2 miles of old road were graded and surfaced and 3 cedar culverts built. From lots 9 to 12, Con. 4, ½ mile of old road was improved by grading and side-draining 80 rods, surfacing with earth and gravel ½ mile and building 3 cedar culverts. Lots 18 and 19, Con. 4, was improved 40 rods through swamp by being graded and gravelled and putting in 9 wooden culverts. From lot 29, Con. 4, to lot 34, Con. 5, ½ mile of old road was graded and surfaced with gravel. From lots 10 to 12, Con. 7, 80 rods were graded and surfaced with earth and 2 cedar culverts built.

Hagarty, Richards and Burns Township Roads.—Between Cons. 2 and 3, across lot 6, 40 rods were improved by being graded and surfaced with earth after several boulders were removed. From lots 27 to 30, Con. 5, ¾ miles of old road were improved by being graded and surfaced with earth, removing stone and spreading a small amount of gravel. The road to the Polish Church, from lot 9, Con. 4, to lot 33, Con. 3, was improved by grading and surfacing with earth ½ mile. The townline of Hagarty and Sherwood across lots 34 and 35 was improved by cutting down a bad hill, building 1 cedar culvert and grading and surfacing with earth 40 rods. The Wilno and Rockingham Road, lots 33 and 34, Range A., was improved by removing stone, grading and surfacing with earth 80 rods. The Wilno Church and Barry's Bay Road on lot 6, Con. 2, was improved by grading and surfacing with earth 40 rods.

Harlowe and Cloyne Road.—This road between lot 32, Con. 3 and lot 6, Range B., Barrie, was improved by blasting out stone, side-brushing 30 rods, grading 27 rods, surfacing with gravel 97 rods and building 2 cedar culverts.

Harvey Township Roads.—Deer Bay Road, lot 13, Con. 7, was improved 65 rods by being surfaced with gravel. Bobcaygeon Road, lot 21, Con. 12, was graded and surfaced with gravel 81 rods. The Sandy Lake Road, lot 9, Con. 11, was surfaced with gravel 95 rods. The gravel had to be hauled a long way.

Hastings Road South of Maynooth.—From lots 50 to 70, Hastings Road, Monteagle and Herschel townships, 2 miles of old road were improved by removing boulders from road bed, blasting boulders from the sides of the road, grading 2 miles and building 8 cedar culverts.

Head, Clara and Maria Township Roads.—The Pembroke Town Road, from lot 10 running east, was improved by fixing several bad places, extending over a distance of 1½ miles, spreading 50 rods of gravel.

Hinchinbrooke Township Roads, Bog Road.—From lots 4 to 8, Con. 10, ½ mile of old road was improved by grading 76 rods, gravelling 56 rods and putting in 2 tile culverts.

Hugel Township Roads.—From lot 7, Con. 6, west, 1 mile 100 rods of new road were chopped and cleared and 1 wooden bridge built.

Hungerford Township Roads.—Across lot 1, Con. 1, 80 rods of old road were graded and surfaced with gravel. Across lots 27 and 28, Con. 8, 40 rods of old road were graded and gravelled and improved by removing stone from a steep hill by blasting. Across lots 1 and 2, Con. 7, large boulders were removed, 80 rods graded and gravelled and 1 cedar culvert built.

Hungerford and Sheffield Boundary south of Stone's Corner.—Three hills containing limestone and gravel were cut down 4 ft. deep, thus improving 80 rods.

Huntingdon Township Roads.—Across lots 17 and 18, Cons. 5 and 6, through a swampy place, 120 rods were graded, 22 rods crowned with broken stone and 98 rods surfaced with gravel.

Kaladar Township Road.—The Kaladar, Northbrooke and Cloyne Road was improved ½ mile by grading 37 rods on a side hill to avoid an old rocky hill. The settlers gave the land. Earth was spread on 147 rods.

L'Amable and Fort Stewart Road.—This road was improved ¾ miles in Mayo township, by removing stumps and stones, clearing and grading ¾ miles, gravelling 80 rods and building 7 cedar culverts.

Lanark, 7th Line, Lots 9 and 10.—Forty rods were stumped and grubbed, 80 rods gravelled and 3 cedar culverts built.

Lavant and Plevna, Storey's Bridge to Plevna.—Lot 20, Cons. 8 to 10, Palmerston township, ¾ miles of old road were improved by clearing and grading 32 rods and gravelling ¾ miles.

Lavant and Pleva, Storey's Bridge to Lavant.—Lot 38, Con. 5, Clarendon township, ¾ miles of old road were improved by grading 180 rods, surfacing with earth 128 rods, building 1 stone and 1 cedar culvert and making a stone fill 4 rods in length from 1 to 3 ft. deep.

Lavant and Folger Road.—From lot 7, Con. 11 to lot 11, Con. 9, Lavant, a new piece of road ½ mile in length was opened up, brushing out 40 rods, stumping and grubbing 80 rods, corduroying 40 rods in a swamp, grading 80 rods and surfacing with earth 80 rods.

Laxton, Digby and Longford Township Roads.—The Carnarvon Road was surfaced with gravel 60 rods. The Monck Road, from lot 11, Con. 4, Laxton, to Con. 1, Digby, was improved 140 rods by grading 15 rods, surfacing 135 rods with shell limestone and repairing a hill by making a fill of 10 yds. at the bottom.

Limerick Township Roads.—Lengthwise of lot 26, Con. 10, 80 rods of road were improved by clearing 40 rods, grading 80 rods, building 1 stone and cedar culvert and making a fill of 200 yds. of stone in a swamp.

Loughborough Township, Buck Lake Road.—From lot 14, Con. 12 to lot 15, Con. 13, 1½ miles of old road were improved by making general repairs, removing stone and filling in ruts with stone.

Loughborough Township, Road from Portland Boundary to Bedford Boundary.—On lot 9, Con. 13, 86 rods of old road were improved by grading 38 rods, crowning with stone 48 rods and covering it with earth and ditching 60 rods.

Lutterworth Township Roads.—The Miner's Bay Road was improved 3 miles by repairing bad places, resurfacing old places with soil, breaking stone at edges of rock, cleaning out side ditches, removing boulders and building 3 wooden culverts. Bobcaygeon Road, from the north Dutch Line to the little red schoolhouse, was improved 2½ miles by taking out the old crossway logs, filling their place with stone and earth, filling in washouts in small sandy hills and resurfacing short pieces.

Lyell Township Roads.—The road from Madawaska to Cross Lake was improved ½ mile by clearing and grading ½ mile, gravelling 10 rods and building 4 wooden culverts. The road south and north from Dunns' lot 26 was improved ¾ miles by clearing and grading 200 rods and building 3 wooden culverts. From lot 31, Con. 9, east from Madawaska Road 1 mile through light sandy soil, was improved by clearing and grading 300 rods.

Madawaska and Hastings Road.—Three miles of old road on the 8th Con., were side-brushed, stumped and grubbed through swampy land and 1 wooden bridge with a span of 60 ft. was built.

Mayo Township Roads.—The Long Lake Road, lot 10, Con. 9, was improved ½ mile by being side-brushed, graded and gravelled, building 3 cedar culverts and a floating cedar corduroy over a sink hole 5 rods in length.

Methuen Township Roads.—The road across lots 30, 31 and 32, Con. 4, was improved by grading 252 rods and removing boulders.

Minden Township Roads.—The Blairhampton Road east from the lake was improved by making a new deviation around a very steep hill on lots 25 and 26, Con. 10, 30 rods being cleared, stumped and graded. On lot 13, Con. 4, 60 rods were gravelled. The Peterson Road, from Bobcaygeon Road east, was worked over 1½ miles by hauling earth on to the road as it was very rocky, and 1 cedar culvert was built.

Monmouth Township Roads.—The South Monmouth Road, from lot 20 south to the Monck Road, was improved 60 rods by grading 15 rods, gravelling 20 rods and ditching 30 rods. The road from Hotspur to Tory Hill was improved 200 rods by grading 100 rods, surfacing with earth 50 rods, ditching 40 rods, filling 10 rods with brush and earth, and building 2 wooden culverts. On the 10th Con. at lot 29, 144 rods of old road were improved by grading 20 rods, gravelling 20 rods, cleaning out 6 offtake ditches and brushing 100 rods.

Montague Township Roads.—Lots 16 to 18, Con. 6, 3¼ miles of old road were graded and crowned with broken stone.

Monteagle Township, Lots 20 and 21, Cons. 11 and 12.—One-half mile of road was improved by removing brush and stone, grading, gravelling and ditching, and building 4 cedar culverts.

Maxam's Settlement Road.—Lots 25 and 26, Con. 13, Monteagle, 80 rods of old road were improved by being graded and gravelled, clearing off the sides of stumps and boulders 40 rods, putting a fill at the foot of a steep hill 10 rods long and 3 ft. deep and building 3 cedar culverts.

Muscow Schoolhouse Road.—From lot 11, Con. 6 to lot 14, Con. 3, Monteagle, a new bridge having a span of 20 ft. and the approaches filled in with stone was

built, and 40 rods were cleared of brush and stumps and graded, 1 cedar culvert was put in and a stone fill of 250 yds. made.

North Algoma Township Roads.—Lots 3 and 4, Con. 8, ½ mile was graded and surfaced with earth after boulders had been removed from the road bed.

North Elmsley Township Roads.—On lot 2, Con. 6, and lot 1, Con. 5, the swamp road was widened out, as it was too narrow for heavy traffic.

Olden Township, McKnight Road.—Lot 21, Cons. 2 and 3, a new road 176 rods in length was cleared, graded and gravelled, and 32 rods of old road were gravelled, and 2 stone and 2 cedar culverts built.

Oso Township, England Road.—On lot 13, Con. 5, 11 rods of new road were cleared, stumped, graded, corduroyed, covered with stone and then surfaced with gravel.

Papineau Township Roads.—Between lots 10 and 11, across Con. 11, 80 rods of old road were cleared, graded and gravelled and 2 wooden culverts built. On lot 33, Con. 12, 80 rods were side-brushed, 20 rods gravelled and 1 wooden culvert built. Chenier's Hill was improved by side-brushing 40 rods, grading 45 rods, and building 2 wooden culverts. Across lot 4, on Con. 8, ¼ mile of new road was opened up through rough and swampy land by clearing, stumping and grubbing 50 rods, grading 50 rods, gravelling 20 rods and building 1 wooden culvert. Between lots 10 and 11 across Con. 12, ¾ miles of old road were improved by underbrushing and grading ½ mile, surfacing 40 rods with sand and building 1 stone culvert. On lot 13, Con. 10, ½ mile of old road was improved by underbrushing and grading 110 rods and building 1 wooden culvert. On lot 25, Con. 10, 100 rods were underbrushed and graded, and 1 wooden culvert built. Mattawa Road, lot 32, was surfaced with gravel 80 rods. On Con. 15, across lots 25, 26 and 27, ½ mile of old road was improved by underbrushing and grading 150 rods and putting in 2 wooden culverts.

Pembroke Township Roads.—From lots 1 to 4, Con. 2, 1 mile of old road was graded and surfaced with gravel.

Petawawa Township Roads.—On lots 9 and 10, Range A., ½ mile of old road was graded and surfaced with earth.

Peterson Road, Maynooth to Combermere.—Across lots 11 to 14, Con. 6, Bangor township, 120 rods of old road were improved by blasting out stones and stumps, underbrushing 80 rods, grading 120 rods and building 3 cedar culverts. On lots 19 and 20, Wicklow township, 120 rods were underbrushed and graded and 2 cedar culverts built.

Portland Township Roads.—The road on lots 22 and 23, Con. 11, was surfaced 204 rods with broken stone.

Radcliffe Township Roads.—Kerwin's Hill, lots 18 and 19, Con. 7, was improved by blasting out rock and removing stone, grading 80 rods and surfacing it with stone and earth. The road from Combermere to Palmer Rapids on Con. 3, from lots 11 to 14, was improved by opening up a new road ½ mile in length around 2 bad hills. This ½ mile was cleared, stumped, grubbed, graded and surfaced with earth, and 1 cedar culvert put in.

Raglan Township Roads.—Hardwood Lake Road, lots 33 and 34, Con. 3, was improved by covering ½ mile of corduroy with gravel. Snake Creek Road, lots 26 to 28, Con. 8, was improved by removing stone, grading and surfacing with earth 120 rods. The road from lot 27, Con. 18, to lot 25, Con. 18, was improved by removing stone, grading and surfacing with earth 120 rods and side-draining it. Lots 16 to 18, Con. 18, ½ mile was improved by being brushed out, removing

stumps and stones for 20 rods, grading and surfacing with earth ½ mile. The road across lots 2 and 3, Con. 2, was improved by grading and surfacing with earth 80 rods, and building 3 cedar culverts. Madigan Hill, lots 28 and 29, Con. 12, 40 rods of old road were improved by building a stone wall along the side of the hill, raising the road bed and surfacing it with stone and gravel.

Rama and Morrison Townline.—Gravel was spread on 280 rods and several large ruts were filled with stone.

Rama Township on Con. 1, Hoyle's Bridge to Bell's Corner.—This work consisted of repairing 219 rods of old road, 160 rods of which were side-brushed. A hollow between 2 hills was filled, 25 stumps were removed and 1 iron culvert placed.

Rama Township, from the Townline North to Lot 21 on the Front Range.—Gravel and cinders were spread on 251 rods of old road, and 1 iron culvert was placed.

Rama Township, Dalton and Washago Road near the Narrows on the Black River.—On this road 182 rods were improved by grading 52 rods, gravelling 130 rods, putting in 2 stone culverts, building a stone wall to prevent the river from washing the road away, and filling in where it was already washed out by the Black River.

Raycroft White Lake Road.—Three-quarter miles were graded, surfaced with earth, ditched and 1 wooden culvert repaired on Con. 8, from lots 16 to 18, Darling township.

Richmond Boundary, West Road North of Kingsport.—Gravel was spread on 52 rods and 45 rods were ditched.

Ross Township Roads.—A new road 40 rods in length was cleared, stumped, grubbed, graded and gravelled, and 1 cedar bridge having a span of 24 ft. built, commencing at lot 10, Con. 1.

Sebastopol Township Roads.—A new road was opened up on Con. 5, from lots 8 to 6 by stumping and grubbing 40 rods, grading and surfacing with earth 80 rods. The Jamieson Mine Road, lot 13, Con. 15, was improved by grading and surfacing with earth 80 rods, removing stone and repairing 3 cedar culverts.

Sherborne Township Roads.—Hallow Lake Road, lot 2, Con. 11, was improved 220 rods by removing pine stumps and stones, grading 80 rods and gravelling 120 rods.

Sherwood Township Roads.—Siberia Road, lots 173 and 174, S.B.R., was improved by grading and surfacing with earth ½ mile and building 2 cedar culverts. The road on lot 7, Con. 4, was graded and gravelled 80 rods. The Barry's Bay and Combermere Road, lots 186 and 187, Range B, was improved by cutting down a steep gravel hill and covering crosslay, 40 rods being graded and gravelled. Wilno and Rockingham Road, lots 35 and 36, Range A, was improved by grading and gravelling 80 rods. The road on lots 16 and 17, Con. 8, was improved by making a new deviation 80 rods in length, the work consisting of removing stones and stumps and grading the road.

Snowdon Township Roads.—The Bobcaygeon Road from the steel bridge was improved 3 miles by taking out logs of old crosslay and filling their places with stone and earth, cleaning side ditches, repairing small culvert and resurfacing 200 rods with earth. The boundary of Snowdon and Minden was surfaced with gravel 1 mile.

South Algona Township Roads.—Telegraph, Killaloe and Germanicus Road opened up by clearing, stumping and grubbing 84 rods and building 1 wooden culverts. The Eganville and Killaloe Road was improved by grading and sur-

facing 120 rods, removing stone and building 1 cedar culvert. On lot 27, Con. 9, and lot 26, Con. 8, 80 rods of old road were graded and surfaced with gravel.

Springer Township Roads.—Four miles of the Smoky Falls Road were improved by making general repairs, spreading some gravel and grading ½ mile.

Stafford Township Roads.—From lots 10 to 7, Range A, 1 mile of old road was graded and ½ mile of it surfaced with gravel.

Stanhope Township Roads.—The road on the south shore of Maple Lake was improved 300 rods by removing stones, gravelling 250 rods and building 2 cedar culverts. The Bobcaygeon Road was improved 6 miles by breaking stone, covering rough places with earth and building 4 wooden culverts.

Tamworth and Arden Road.—From lot 6, Con. 4, to lot 1, Con. 3, Kennebec, 1 mile of old road was improved by side-brushing 40 rods, grading 176 rods, gravelling 124 rods, ditching 15 rods, putting in 2 tile, 3 stone and 2 cedar culverts and making a stone fill.

Tamworth Road running north.—Three limestone gravel hills from lots 5 to 7, Con. 10, were cut down 4 ft. each.

Tyendinaga Township Roads.—On lot 40, Con. 6, 52 rods were surfaced with gravel and 45 rods ditched. On lot 10, Con. 8, Tyendinaga Gore, 40 rods were graded, 20 rods of it covered with gravel and 20 rods with broken stone.

Tudor and Cashel Township Roads.—An old trail through the woods was widened out, graded and gravelled 80 rods in length and 3 cedar culverts built.

Vanacher and Matawatchan Road.—From lots 9 to 4, on Con. 2, ¾ miles of old road were improved by grading 225 rods, gravelling 37 rods, putting stone on 20 rods and building 8 cedar and 3 stone culverts.

Westmeath Township Roads.—Lots 15 and 18, Front E, ¾ miles of old road through a swamp were improved by clearing 80 rods and gravelling 240 rods.

Westport and Sherbrooke Northern Road.—On lot 13, Con. 7, North Crosby, 96 rods were graded and gravelled.

Westport and Sherbrooke South Road.—Three-quarter miles of old road on Cons. 1 and 2, lot 26, were improved by grading 146 rods and gravelling 46 rods.

White Lake Road.—From lots 4 to 6, Con. 9, McNab township, ½ mile of clay road was graded and surfaced with a heavy coat of gravel.

Wicklow and M'Clure Township Roads.—The road on the boundary across lot 1 was improved by removing large stones, under-brushing 20 rods, grading 120 rods and gravelling 80 rods. On Con. 2, from lots 10 to 15, 80 rods were graded, general repairs made and a new cedar bridge built.

Widdifield Township Roads.—The road on Con. 13, across lots 6 and 7, was opened up by clearing, stumping and grubbing 84 rods and building 1 wooden culvert. Cons. A and B, sideroad, was improved 1½ miles by making general repairs, spreading gravel on ½ mile and building 1 wooden culvert. The North Bay sideroad from lot 14, Con. 11, north, was improved 1 mile by under-brushing and grading 200 rods, gravelling 200 rods and building 1 wooden culvert. Timiskaming Road, Con. 3, lots 22 to 24, was opened up by clearing, stumping, grubbing and gravelling 150 rods and building 1 wooden culvert. The sideroad between lots 19 and 20 was improved by grading 150 rods, gravelling 80 rods, building 2 wooden culverts and by opening up a new road 100 rods in length on which were built 2 wooden culverts. On Con. 1, lot 6, 55 rods of new road were opened up by being cleared, stumped, graded and surfaced with gravel and building 1 wooden culvert. On lot 16, Con. D, 60 rods of new road were chopped, stumped and grubbed, 40 rods graded and 30 rods gravelled. On lot 9, Con. A, 80 rods were under-brushed and graded and 3 wooden culverts built. On Con.

C, lots 16 and 17, 80 rods were under-brushed and graded. On lots 7 and 8, Cons. A and B, 60 rods were under-brushed and graded, 20 rods gravelled and 2 wooden culverts built. Between lots 15 and 16, Cons. 1 to 11, ¾ miles of old road were improved by under-brushing 50 rods and surfacing 150 rods with gravel.

Wilberforce Township Roads.—District Line M and L was improved ¾ miles by being graded, surfaced with earth 140 rods and putting in 1 cedar culvert. Dore Bay Hill, lots 30 and 31, Con. 23, was improved by removing stone, side-draining, grading ½ mile, building 3 cedar culverts and repairing a bridge. Lake Dore Hill, lot 4, Con. 16, was improved by side-draining and gravelling 40 rods. Germanicus and Eganville Road, lot 21, Cons. 14 and 15, was improved by repairing a rocky hill, 40 rods being graded and surfaced with earth.

Wylie Township Roads.—Moore Lake Road from lot 35, Con. 12, to lot 31, Range A, was improved by making general repairs, removing stone, grading and surfacing ½ mile.

Repairs and Maintenance.

Alice Township.—Pembroke and Eganville Road, lots 5 and 6, Range B, ½ mile of road was graded and surfaced with gravel.

Belmont Township.—Cordova and Havelock Road, lots 12 to 15, Con. 2, 60 rods were graded and crowned with crushed stone. Between lots 9 and 10, across Cons. 4, 5 and 6, 205 rods were graded and 157 rods surfaced with crushed stone and 37 rods with gravel.

Darling Township.—Hall's Mill and Clayton Road, from lot 1, Con. 10, to lot 4, Con. 1, ½ mile was graded and gravelled and 1 cedar culvert built.

Griffith Township.—Molybdenite Mine Road from lot 34, Con. 4, was graded and surfaced 2 miles and 3 cedar culverts built.

Hagarty Township.—Killaloe and Brudenell Road, from lot 9, Range A, to lot 8, Con. 1, ½ mile was graded and surfaced with earth and 2 cedar culverts built.

Madoc Township.—Eldorite Mine Road, between lots 20 and 21, and across lot 2, Con. 5, ¾ miles of road were graded and surfaced with gravel, 2 hills cut down and stones removed.

Petawawa Township.—Road on lots 11 and 12, Range A, was improved by putting in 2 concrete culverts and grading and surfacing with earth 80 rods.

Ross Township.—Cobden and Eganville Road, lots 4 and 5, Con. 1, gravel was hauled and spread on ½ mile.

Widdifield Township.—Thibault Hill, a deviation was made to avoid the present heavy hill, ½ mile being constructed. ¼ mile of this was chopped out and the whole of it graded. One concrete and 6 wooden culverts were put in.

Wilberforce Township.—Golden Lake and Germanicus Road, lot 31, Con. 18, 40 rods were graded and gravelled. Mud Lake Road, lots 24 and 25, Con. 10, a bad hill was repaired by removing stone, grading and surfacing with earth ½ mile.

Wollaston Township.—Road on lots 1 and 2, Con. 8, 120 rods were graded, 3 cedar culverts built and a stone fill of 50 yds. made.

East Division By-laws.

Admaston By-law No. 214.—Road No. 1, South McNaughton Road opposite lot 23, S.B.R., a concrete culvert 24 ft. in length was built with 3 wing walls and 1 retaining wall.

Bancroft By-law No. 126.—Road No. 1, on Hastings St. from Bridge St. northerly, ¼ mile of old road was cleared, stumped, graded and surfaced and 2 cedar culverts built.

Belmont and Methuen By-law No. 572.—Road No. 1, between Cons. 2 and 3, across lots 1 to 5, a new piece of road 43 rods in length was graded around a hill. Road No. 2, between Cons. 9 and 10, lots 7 to 11, 125 rods were crowned with crushed stone. Road No. 3, between Cons. 2 and 3, lots 17 to 21, 84 rods were surfaced with gravel and 33 rods crowned with crushed stone. Road No. 4, across Cons. 11 and 12, on lots 8 and 9, 114 rods were surfaced with gravel. Road No 5., on Con. 5, from lots 4 to 5, 18 rods were crowned with crushed stone. Road No. 6, on Con. 11, from lots 3 to 6, 90 rods were surfaced with gravel. Road No. 7, on Con. 2, from lots 11 to 14, 84 rods were graded and 2 concrete culverts built. Road No. 8, on Con. 9, from lots 17 to 19, 75 rods were crowned with crushed stone.

Brighton By-law No. 591.—Road No. 2, from the centre of Con. 3 north through lots 3 and 4, 198 rods were graded and gravelled.

Bromley By-law No. 241.—Road No. 1, between Cons. 4 and 5, from lots 6 to 9, ¾ miles were graded and surfaced with gravel. Road No. 2, between lots 15 and 16, across Con. 3, 1 mile was graded and gravelled. Road No. 3, between lots 3 and 4, across Con. 7, 1 mile was graded and gravelled. Road No. 4, Ross and Bromley townline, lots 17 to 19, 180 rods were graded and surfaced with gravel. Road No. 5, on Force Road, across lots 23, 24 and 25, Con. 4, ¾ miles were graded and surfaced with gravel. Road No. 6, Wilberforce and Bromley townline, lots 16, 17 and 18, ¾ miles were graded and gravelled. Road No. 7, between lots 19 and 18, Cons. 5 and 6, ¾ miles were graded and gravelled. Road No. 8, on Force Road, across lots 11 and 12, Con. 9, ½ mile was graded and gravelled.

Caldwell By-law No. 228.—Road No. 6, between lots 8 and 9, from Con. 4 to Con. C, 5 miles of old road were repaired by grading 1 mile, gravelling 1 mile 170 rods and building 3 wooden culverts. Road No. 7, between Cons. 1 and 2, from Springer to Kirkpatrick, 6 miles of old road were improved by grading 77 rods, gravelling 1 mile 54 rods and building 3 wooden culverts. Road No. 8, between Cons. A and 1, from lot 9 to McPherson township, 4 miles of old road were improved, 133 rods being graded and 134 rods gravelled. Road No. 9, between Cons. A and B, from Springer township to McPherson township, 6 miles of old road were improved by gravelling 1¾ miles and building 3 wooden culverts. Road No. 10, between lots 9 and 10, Con. 4, 77 rods were gravelled and 2 iron culverts put in.

Camden By-law No. 431.—Road No. 1, between Cons. 8 and 9, from lots 2 to 4, 175 rods were surfaced with gravel. Road No. 2, across Con. 4, lots 32 to 34, 1¼ miles were surfaced with broken stone. Road No. 5, between Cons. 7 and 8, lots 37 to 42, 130 rods were crowned with broken stone. Road No. 6, between lots 1 and 2, Con. 9, 85 rods were surfaced with gravel. Road No. 7, between lots 25 and 26, Con. 4, 250 rods were surfaced with broken stone.

Carlow By-law No. 76.—Road No. 1, between Cons. 2 and 3, from lots 11 to 13, 120 rods were cleared and graded and 2 cedar culverts built. Road No. 4, on Con. 6, from lots 15 to 20, 80 rods were graded, 20 rods gravelled and 2 cedar culverts built. Road No. 5, on Con. 8, from lots 22 to 30, 80 rods were side-brushed and surfaced with gravel. Road No. 6, between Cons. 13 and 14, across lots 4 to 6, 80 rods were underbrushed and graded and 3 cedar culverts put in.

Cosby and Mason By-law No. 19.—Road No. 1, Cosby and Mason boundary,

from lots 1 to 13, 5 miles of road were graded and 100 rods ditched. Road No. 3, between Cons. 2 and 3, 3 miles of old road were improved by grading 2 miles 260 rods, ditching 56 rods, building 1 wooden culvert and stumping and grubbing 75 rods of new road. Road No. 4, between Cons. 3 and 4, 2 miles of old road were graded and 75 rods ditched. Road No. 5, between lots 6 and 7, across Cons. 1, 2 and 3, 1¼ miles of new road were opened up, 2 wooden culverts being built and 60 rods ditched. Road No. 7, Cosby and Martland boundary, 3 miles of old road were graded, 6 wooden culverts built and 87 rods ditched.

Douro By-law No. DCCCXXII.—Road No. 1, Lakefield to Young's Point, 44 rods were crowned with broken stone and 58 rods surfaced with gravel. Road No. 2, Dummer Road, Cons. 3 and 4, 114 rods were graded and gravelled. Road No. 3, between Cons. 4 and 5, across lots 6 and 7, 44 rods were surfaced with gravel. Road No. 4, Dummer Road, Cons. 9 and 10, Cons. 2 and 3, 198 rods were gravelled.

Dummer By-law No. 820.—Road No. 1, between lots 10 and 11, across Con. 3, 91 rods were crowned with broken stone and then gravelled. Road No. 3, on Con. 9, from lots 1 to 6, 47 rods were crowned with broken stone. Road No. 4, on Con. 4, lots 13, 14 and 15, ½ mile of old road was improved by grading 144 rods, gravelling 16 rods and building 1 stone bridge, having a span of 12 ft. Road No. 5, between lots 30 and 31, Con. 8, 39 rods were graded and crowned with broken stone. Road No. 6, between lots 25 and 26, across Cons. 1 and 2, 75 rods were surfaced with earth and 1 stone crossway constructed.

Dungannon By-law No. 86.—Road No. 1, L'Amable and Carlow Road, Con. 7, lots 25 and 26, boulders were blasted out, 40 rods graded and 1 cedar bridge built. Road No. 2, on Con. 4, lots 25, 26 and 27, ½ mile was underbrushed and graded, and 1 cedar culvert built. Road No. 3, Snow Road, lots 23 and 24, Con. 9, 80 rods were graded and 3 cedar culverts built. Road No. 4, between lots 10 and 11, Con. 6, 80 rods were graded, 40 rods crowned with broken stone and a stone and earth fill of 400 yds. made.

Dysart By-law No. 567.—Road No. 1, Guilford township Roads, 14 miles of road were improved by surfacing, filling ruts, cleaning side ditches, repairing culverts and washouts on hills. Road No. 2, Haliburton to west Guilford, new road was stumped and grubbed 2 miles 60 rods, graded 3 miles, gravelled 3 miles and 90 yds. of cut and fill of earth and rock were made, and 20 cedar culverts built. Road No. 3, from Haliburton to Fort Irwin, 13 miles of road were improved by filling ruts, resurfacing with gravel low places and stony hills and cleaning out side ditches. Road No. 4, from Haliburton to Monmouth boundary, 12 miles of old road were improved by resurfacing pieces with gravel, filling washouts on hills and repairing culverts. Road No. 5, from Haliburton to Glamorgan boundary, 6 miles of old road were repaired by cutting ruts, resurfacing low places and hills with earth and some places with gravel. Road No. 6, from Haliburton on the south shore road to Minden boundary, 6 miles were repaired by resurfacing short pieces with gravel, grading and filling ruts with small stones. Road No. 7, from Haliburton on the north shore road to the boundary of Minden, 4 miles of old road were repaired by hauling gravel on the old crossway, filling washouts on hills and cleaning side ditches. Road No. 8, from Gilmour's Corner in Dysart Township to Eagle Lake in Guilford Township, 6 miles of old road were improved by hauling gravel on the low places, resurfacing hills with gravel and soil and filling with small stone places washed out by water. Road No. 9, from Cardiff boundary to Avey Brothers' Mill, 65 rods of old road were improved by grading 20 rods, surfacing with earth

20 rods, filling several places with brush and soil 25 rods, and building 2 cedar culverts.

Eldon By-law No. 447.—Road No. 1, between Cons. 2 and 3, from lots 2 to 7, 230 rods of old road were improved by grading 60 rods, gravelling 110 rods, digging an offtake ditch 60 rods in length and putting in 1 concrete culvert. Road No. 2, between lots 5 and 6, Con. 2, 40 rods were graded and surfaced with gravel. Road No. 2A., between Cons. 2 and 3, lots 16 to 20, 190 rods were surfaced with gravel. Road No. 3, between lots 15 and 16, across Con. 1, 110 rods of old road were improved by side-brushing 50 rods, grading 60 rods and gravelling 40 rods. Road No. 4, Eldon and Mariposa boundary, from Con. 7 west, 150 rods were crowned with broken stone. Road No. 5, between Cons. 7 and 8, from lots 12 to 17, 48 rods were graded and gravelled and 90 rods crowned with broken stone. Road No. 6, between lots 10 and 11, across Con. 6, 60 rods were gravelled. Road No. 7, between lots 20 and 21, Cons. 6 and 7, 200 rods were crowned with broken stone. Road No. 7 A., between lots 20 and 21, Con. 9, 80 rods were gravelled. Road No. 8, between Cons. 9 and 10, from lots 16 to 18, 45 rods were graded and crowned with crushed stone. Road No. 9, between lots 20 and 21, Cons. 1 and 2, 195 rods were surfaced with gravel. Road No. 10, between Cons. 4 and 5, from lots 17 to 20, 40 rods were graded and 25 rods surfaced with gravel.

Elzevir and Grimsthorpe By-law No. 134 "A".—Road No. 1, between Cons. 6 and 7, across lots 4 and 5, ¾ miles was surfaced with gravel and 1 cedar culvert built. Road No. 2, between Cons. 1 and 2, across lots 4 and 5, 120 rods were graded and gravelled. Road No. 3, on Con. 4, across lots 20 and 21, 80 rods were graded and gravel spread on ¾ miles. Road No. 4, between Cons. 5 and 6, across lot 4, ½ mile of old road was improved by grading 80 rods and gravelling ½ mile. Road No. 5, through lot 5, Con. 4, ½ mile was graded and gravelled, and 1 metal culvert put in. Road No. 6, Con. 10, lots 19 and 20, 80 rods were graded, 120 rods gravelled and considerable blasting done for ditches.

Faraday By-law No. 71.—Road No. 1, on Con. 11, from the east side of lot 4 westward, 40 rods were side-brushed and graded and stones removed from the road bed. Road No. 2, from Godfrey's Hill, lot 17, Con. B., westerly, 40 rods were side-brushed and graded, 1 cedar culvert built and an earth cut and fill of 300 yds. made. Road No. 3, from the foot of Peterboro Hill, lot 9, Con. 3, westerly, 80 rods were graded and surfaced with earth, 10 rods side-brushed and a good railing placed on the side of the hill. Road No. 4, from Albion Creek, lot 30, Con. 10, westerly, 64 rods were graded and surfaced with gravel, 40 rods side-brushed and 10 rods of corduroy cut and laid without stringers.

Front of Leeds and Lansdowne By-law No. 715.—Road No. 1, between Cons. 2 and 3, from lots 16 to 18, 1¼ miles were crowned with broken stone, top dressed with fine stone and rolled. Road No. 2, between Cons. 1 and 2, from lots 13 to 20, 1 mile was crowned with broken stone, top dressed with fine stone and rolled. Road No. 3, from lot 6, Con. 1, Lansdowne, to lot 19, Con. 1, Leeds, 1¼ miles were crowned with broken stone. Road No. 4, north from lot 7, Con. 4, Leeds, to Con. 6, Leeds, 1 mile 30 rods were crowned with broken stone, top dressed with gravel and small stone. Road No. 5, from lot 19, Con. 2, Leeds, south to lot 21, Con. 1, 1 mile 20 rods were surfaced with gravel.

Hinchinbrooke By-law No. 8.—Road No. 1, Frontenac Road, from lot 1, Con. 3, to lot 30, Con. 4, 1 mile 23 rods were graded, 63 rods gravelled and 3 tile culverts put in. Road No. 2, Arden and Parham Road, from lot 26, Con. 10 to lot 26, Con. 1, 290 rods were graded, 104 rods gravelled and 4 cedar culverts built. Road

No. 3, Ruttan and Wagar Road, from lot 22, Con. 8, southerly to Portland boundary, 218 rods were graded and 37 rods surfaced with sand. Road No 4, Bush and Oak Flats Road, from lot 2, Con. 11, east to lot 5, Con. 4, 276 rods were graded, 76 rods surfaced with earth and 4 tile culverts built. Road No. 5, Haddock and Parham Road, from lot 5, Con. 6, north to lot 15, Con. 6, 1 mile was graded and 50 rods surfaced with earth. Road No. 6, Echo Lake Road, from lot 14, Con. 6, north to lot 16, Con. 6, 50 rods were graded, 15 rods in a flat crowned with broken stone, and 2 cedar culverts built.

Hungerford By-law No. 56.—Road No. 1, Con. 12, lots 6 to 10 inclusive, 100 rods of old road were improved by making general repairs, grading and gravelling 40 rods, and making a stone fill at a hill of 200 yds., with good rails and 42 cedar posts. Road No. 2, between Cons. 7 and 8, lots 25 to 32, ¾ miles of old road were improved by grading 40 rods, crowning 120 rods with broken stone, 120 rods with gravel, and making a stone fill of 100 yds.

Huntingdon By-law No. 373.—Road No. 1, between Cons. 5 and 6, lots 7 to 9, 15 rods were graded and 80 rods gravelled. Road No. 2, on Con. 13, from lots 1 to 6, 91 rods were graded and 121 rods surfaced with gravel. Road No. 4, between Cons. 6 and 7, lots 3 to 5, 200 rods were surfaced with gravel. Road No. 5, between Cons. 1 and 2, lots 2 to 7, 91 rods were graded, 10 rods crowned with broken stone and 95 rods surfaced with gravel.

Kennebec By-law No. 6.—Road No. 1, The Arden and Olden Road, was improved 1 mile, grading 43 rods, surfacing with earth 1 mile and putting in 4 culverts, 2 tile and 2 cedar. Road No. 2, Arden and Tamworth Road was improved 1¼ miles by side-brushing 40 rods, grading 53 rods, surfacing with earth 1¼ miles and placing stone on 15 rods. Road No. 3, the Arden and Kaladar Road was improved 1 mile by grading 69 rods, surfaeing with sand 1 mile, putting in 1 tile, 1 cedar and 1 stone culvert, and placing stone on 13 rods. The Arden and Harlow Road was graded 29 rods, surfaced with earth 1½ miles, and had 1 stone and 6 cedar culverts put in on it.

Limerick By-law No. 4.—Road No. 2, between Cons. 10 and 11 east from Hastings Road to lot 26, 1 mile of new road was graded 14 ft. wide and 2 cedar culverts built.

Loughboro By-law No. 78 "A."—Road No. 1, between lots 12 and 13, across Cons. 5 and 6, ¾ miles of old road were improved by grading and gravelling 173 rods, and making a small rock cut on a hill. Road No. 2, between Cons. 5 and 6, from the Portland boundary to Sydenham via sideline between lots 3 and 4, 16 rods were graded, 180 rods crowned with broken stone and ditched on both sides, and 4 tile culverts put in

Madoc By-law No. 19.—Road No. 2, between lots 5 and 6, Cons. 9 and 10, 80 rods were graded and gravelled. Road No. 3, lots 5 and 6, Con. 9, 80 rods were were graded and gravelled. Road No. 6, between Cons. 9 and 10, lots 26 to 29, ½ mile was graded and gravelled and 1 cedar culvert built. Road No. 7, between Cons. 3 and 4, across lots 20, 21 and 22, 200 rods were graded and gravelled and 3 cedar culverts built. Road No 8, on Con. 3, across lots 11, 12 and 13, ¾ miles were graded, ½ mile gravelled and 1 cedar culvert built.

Marmora and Lake By-law No. 501.—Road No. 1, between Cons. 10 and 11, across lots 18 and 19, 40 rods were under-brushed, graded and gravelled, and a stone fill of 84 yds. made.

Martland By-law No. 106.—Road No. 1, Cons. 1 to 6 on the east boundary,

1¼ miles of old road were improved by grading 104 rods, gravelling 73 rods, building 7 wooden culverts and making an earth fill of 110 yds. Road No. 2, between Cons. 1 and 2, lot 1, ½ mile was improved by grading 156 rods, building 4 wooden culverts and ditching 73 rods. Road No. 3, on the line between Cons. 2 and 3, 78 rods of new road were stumped and grubbed, 39 rods graded and 1 wooden culvert built. Road No. 4, between Cons. 4 and 5, from lots 1 to 6, 156 rods were graded, 78 rods gravelled, 20 rods ditched and 4 wooden culverts built.

Mayo By-law No. 291—Road No. 1, between Cons. 13 and 14, lots 23 to 30, 40 rods of old road were under-brushed, stumped, graded, gravelled and 3 cedar culverts built. Road No. 3, on Con. 14, lots 22 to 24, an old corduroy was replaced with a fill, and 3 large cedar culverts. Road No. 4, Con. 11, lots 20 to 27, 80 rods were under-brushed and graded, 10 rods of corduroy covered with earth and 2 cedar culverts built.

Monteagle and Herschel By-law No. 442.—Road No. 1, between Cons. 11 and 12, lots 1 to 6, 40 rods were under-brushed, graded and surfaced with gravel and 3 cedar culverts built. Road No. 2, between lots 24 and 25, Con. 14, ½ mile was graded and surfaced with earth after 30 rods of it had been under-brushed. Road No. 5, along lot 11, Con. 6, 80 rods were under-brushed, graded and surfaced with earth and 1 cedar culvert built. Road No. 6, on Con. 6, along lot 27, 80 rods were graded, 40 rods crowned with broken stone and 4 cedar culverts built. Road No. 7, from Lynn's Corner to Hybla Siding, 120 rods were graded, 20 rods under-brushed and gravelled and 4 cedar culverts built. Road No. 8, lot 10, Con. 12, 40 rods were graded and 4 cedar culverts built, 2 with stone foundations. Road No. 9, Con. 12, lots 19 and 20, 20 rods were improved by blasting out large rocks and boulders, and building 2 cedar culverts. Road No. 12, lot 21, boundary of Faraday and Herschel, 80 rods were under-brushed and graded, 5 cedar culverts built and a number of large boulders blasted out. Road No. 13, Hastings Road, west side of Con. 14, 1 mile was graded and 2 cedar culverts built.

Murray By-law No. 816.—Road No. 5, Murray Gravel Road, from the township of Brighton east, 162 rods were graded and surfaced with gravel. Road No. 6, Ridge Road, from Sydney townline west to the village of Wooler, 200 rods were graded and surfaced with gravel. Road No. 7, from the village of Stockdale west and north to the rear of Murray township, 108 rods were graded and surfaced with gravel. Road No. 8, Carrying Place Road, from Ameliasburg, 180 rods were graded and gravelled.

North Crosby By-law No. 496.—Road No. 1, Newboro and Bedford Mills Road, lot 3, 27 rods were graded and surfaced. Road No. 4, Westport and Perth Road, Mountain Hill, 137 rods were graded and ditched. Road No. 5, Ardmore Road, Cons. 3 and 4, 76 rods were graded and surfaced with gravel.

Olden By-law No. 39 "B."—Road No. 1, from lot 1, Con. 7, to lot 21, Con. 6, 125 rods were graded and another 115 rods surfaced with gravel. Road No. 2, Long Lake and Hungry Bay Road, 1 mile was improved by grading 167 rods and gravelling 185 rods. Road No. 3, Arden and Oso Road, east from lot 18, 1 mile was improved by grading 76 rods, surfacing with earth 205 rods and putting in 4 tile culverts. Road No. 4, Tamworth and Beverly Road, from lot 18 east, ½ mile was improved by grading 27 rods and gravelling 115 rods. Road No. 5, McLean Road, from lot 1 north-easterly, ½ mile was improved by grading 47 rods, gravelling 67 rods, and putting in 4 tile culverts. Road No. 6, Babcock Road, from lot 3, easterly, 41 rods were graded and 96 rods gravelled. Road No. 7, Storms and Sharbot Lake Road, 148 rods were surfaced with gravel. Road No. 8, Chapman

and Garrett Road, 150 rods were graded and 4 cedar culverts built. Road No. 9, Veley and McGinnis Road, 65 rods were graded, 90 rods gravelled and 3 cedar culverts built.

Oso By-law No. 109.—Road No. 1, from lot 13, Con. 1 to lot 16, Con. 3, 126 rods were graded and gravelled. Road No. 2, Crow Lake Road, Cons. 2 to 4, 40 rods were under-brushed and 123 rods gravelled. Road No. 3, Crawford Road, 2 bridges were built one having a span of 12 ft. and the other 20 ft., one with stone abutments the other with cedar piers and both covered with cedar. Road No. 4, Zealand-Clarendon Road, from lot 20 north, 27 rods were graded, 156 rods surfaced with earth and several boulders removed. Road No. 5, England Road, from Fall River Bridge north, 41 rods were graded and gravelled, and a fill of logs and stones made. Road No. 6, from lot 2, Con. 4, to lot 1, Con. 6, on Bollingbrooke Road, 97 rods were surfaced with gravel and a fill with logs and stone 27 rods in length was made. Road No. 7, Crow Lake Road, Con. 3, 42 rods were surfaced and a hill cut down 4 ft.

Pittsburg By-law No. 10.—Road No. 1, between Cons. 4 and 5, lots 12 to 38, 208 rods were crowned with broken stone and then covered with gravel. Road No. 2, lots 32 and 33 on the 9th Con., 200 rods were gravelled, nicely top dressed and rolled. Road No. 3, from lot 18, Con. 2, to lot 26, Con. 3, 215 rods were crowned with broken stone and then covered with gravel.

Portland By-law No. 519.—Road No. 1, between Cons. 4 and 5, lots 14, 15 and 16, 287 rods were crowned with broken stone. Road No. 2, between Cons. 5 and 6, from lot 13 to the Camden boundary, 1¼ miles were crowned with broken stone. Road No. 3, between Cons. 2 and 3, lots 10, 11 and 12, 1 mile was crowned with broken stone and a little blasting done. Road No. 5, from lot 22, Con. 14, west to Camden boundary, 1¼ miles were crowned with broken stone and some rock blasted out. Road No. 6, between Cons. 13 and 14, from lot 13 west, 30 rods were graded, and 1 mile 35 rods crowned with broken stone.

Rawdon By-law No. 364.—Road No. 1, between Cons. 13 and 14, lots 1 to 7, ¾ miles were graded and surfaced with gravel. Road No. 2, north-east from lot 24, Con. 14, 1 mile of old road was recrowned with gravel.

Rear Leeds and Lansdowne By-law No. "C".—Road No. 1, between Cons. 8 and 9, lots 2 to 8, 85 rods were graded and surfaced with gravel, and good ditches made on both sides of it.

Rear Leeds and Lansdowne By-law No. "D".—Road No. 1, between Cons. 8 and 9, from lots 6 to 10, 175 rods were graded and surfaced with gravel and broken stone and considerable blasting done. Road No. 2, between Cons. 7 and 8, lots 8 to 11, 2 miles were graded and surfaced with gravel.

Richmond By-law No. 618.—Road No. 1, between Cons. 4 and 5, lots 1 and 2, 108 rods were gravelled and the approaches to the bridge, 20 rods in length, filled with stone. Road No. 2, between Cons. 4 and 5, lot 22, 176 rods were crowned with broken stone. Road No. 3, between Cons. 10 and 11, across lots 9 and 10, 76 rods were surfaced with gravel and a big hill cut down 3 ft.

Ross By-law No. 331.—Road No. 1, Queen's Line from lot 23, eastward, 80 rods were graded and gravelled. Road No. 2, between lots 26 and 27, across Con. 8, 80 rods were graded and gravelled. Road No. 3, between Cons. 6 and 7, across lots 6, 7 and 8, 60 rods were graded and gravelled. Road No. 4, Ross and Bromley townline, lots 6 to 17, 110 rods were graded and surfaced with gravel. Road No. 5, between Cons. 5 and 6, lots 19 and 20, 60 rods were graded and gravelled. Road No. 7, between lots 10 and 11, across Cons. 4 and 3, 60 rods were graded and

gravelled. Road No. 8, Ross and Westmeath townline, Con. 7, 80 rods were graded and gravelled. Road No. 9, between Cons. 4 and 5, lots 17 and 18, 60 rods were graded and gravelled. Road No. 10, between lots 10 and 11, across Cons. 7, 8 and 9, 1 mile was graded and surfaced with gravel. Road No. 11, from the butter factory in Con. 2, south ½ mile, was graded and surfaced with gravel.

Seymour By-law No. 885.—Road No. 1, Seymour and Brighton boundary, 136 rods were graded and surfaced with crushed stone. Road No. 2, from Campbellford to Trent River 207 rods were graded, 114 rods surfaced with gravel and 1 concrete culvert built.

Somerville By-law No. 674.—Road No. 1, between Cons. 10 and 11, across lots 17 and 18. 40 rods were gravelled and 80 yds. of stone fill made at the bottom of a hill. Road No. 3, lots 44 and 45, Front Range, 60 rods were crowned with broken stone. Road No. 5, between Cons. 8 and 9, from the boundary to Burnt River, 200 rods were graded and resurfaced and 4 concrete culverts put in. Road No. 7, between Cons. 6 and 7, lots 22 and 23, 10 rods were graded and 60 rods crowned with shell stone. Road No. 8, Monck Road, across lots 5 and 6, Con. A., 130 rods were graded, 40 rods crowned with shell limestone and 2 cedar culverts built. Road No. 9, between Cons. 10 and 11, across lots 6 and 7, 100 rods were graded, 40 rods crowned with broken stone and 1 concrete culvert put in.

Springer By-law No. 287.—Road No. 1, between Cons. 2 and 3, 1¼ miles were graded, 2 concrete culverts built and 1 wooden bridge repaired with a new stringer and 3-in. cedar plank. Road No. 2, between lots 7 and 6, 1½ miles were graded, 50 rods gravelled, 75 rods ditched and 1 wooden culvert built.

Stafford By-law No. 659.—Road No. 1, between Cons. 2 and 3, lots 4 to 6, 120 rods were graded and gravelled. Road No. 2, on Con. 1, lots 18 and 19, 120 rods were graded and gravelled. Road No. 3, on Con. 4, across lots 3 and 4, 130 rods were graded and 140 rods gravelled. Road No. 4, Stafford and Bromley townline, Cons. 3 to 5, 130 rods were graded and gravelled. Road No. 5, Stafford and Westmeath boundary, lot 6, 100 rods were graded and gravelled. Road No. 6, Stafford and Alice boundary, from G.T.R. crossing south, 130 rods graded and gravelled.

Storrington By-law No. 462.—Road No. 1, between Cons. 3 and 4, lots 21 to 24, 234 rods were crowned with broken stone. Road No. 3, between lots 7 and 8, Con. 8, 185 rods were crowned with broken stone. Road No. 5, on Con. 7, from lots 19 to 21, 57 rods were graded, 132 rods gravelled and 2 tile culverts built.

Tudor and Cashel By-law No. 12.—Road No. 1, East Hastings Road in Tudor, ½ mile was crowned with broken stone and 1 cedar culvert built. Road No. 2, West Hastings Road from Millbridge, ¾ miles were crowned with broken stone. Road No. 3, from Gilmour, Con. 18, east across lots 11 to 4, 50 rods were gravelled, 190 rods crowned with broken stone. 2 stone and 2 cedar culverts and 1 cedar bridge having a span of 20 ft. were built.

Tyendinaga By-law No. 648.—Road No. 1, between Cons. 6 and 7, from lots 35 to 40, ½ mile was graded and gravelled. Road No. 2, between lots 15 and 16, across Con. 2, ¾ miles were graded and gravelled. Road No. 3, between Cons. 3 and 4, from lots 24 to 30, 80 rods were graded and 1 mile surfaced with gravel.

Westmeath By-law No. 148.—Road No. 2, between Cons. 7 and 8, across lots 4 and 5, ¾ miles were graded and gravelled. Road No. 4, on the Roche Fendu Road, from Gower Line, ¾ miles were graded and gravelled. Road No. 5, on the Gower Line, ¾ miles were graded and gravelled. Road No. 6, Westmeath and Pembroke Road, lots 16 to 22, 280 rods were graded and gravelled. Road No. 7,

Cobden and Pembroke Road, Cons. 1 and 2, lots 6 and 7, 280 rods were graded and gravelled.

Wollaston By-law No. 8.—Road No. 1, between Cons. 8 and 9, from lot 11 to the boundary, 80 rods of old corduroy were covered with gravel 2 loads deep and the sides of the road brushed out. Road No. 3, between lots 15 and 16, Cons. 9 to 16, 1¼ miles of old road through a swamp were surfaced with earth and gravel and 2 cedar culverts were built.

TEMISKAMING DISTRICT.

Armstrong, Con. 5, *Lots* 8, 9, *and* 10.—A new road ¾ miles in length was opened up by clearing, stumping and grubbing ½ mile, grading ¾ miles, building 2 wooden culverts and making a fill of 95 cu. yds. of earth.

Armstrong and Hilliard Townline, Cons. 1 *to* 3.—Three miles of old road were widened 4 ft. and graded, 80 rods were surfaced with gravel, 110 rods with earth, 13 wooden culverts built and an earth fill of 64 cu. yds. made.

Barber and Cane Boundary from Mountain Chutes.—A new road 260 rods in length was opened up by stumping and grubbing ½ mile, grading 260 rods and building 1 wooden culvert and 1 wooden bridge.

Brethour and Casey Townline east of Wright's Creek.—Two miles of new road were opened up, ½ mile being stumped and grubbed, and ½ mile graded, 6 wooden culverts built, 272 rods ditched, and ¾ miles of ditches deepened, 154 rods corduroyed, and an earth fill of 679 cu. yds. made.

Bucke and Firstbrooke Road.—Boulders were blasted out and 20 rods of road surfaced with broken stone and gravel on a rocky hill.

Bucke Township, Lots 3 *and* 4, *Con.* 1.—Two miles of new road were cleared through a rough piece of country, and 1 wooden bridge having a span of 70 ft. was built.

Cane Township, Lots 8 *and* 9, *Con.* 5.—One mile of new road was opened up were opened up by clearing 270 rods, grading 1½ miles and building 1 wooden culvert.

Cane Township, Lots 8 *and* 9, *Con.* 5.—One mile of new road was opened up by clearing and under-brushing 1 mile, stumping and grubbing ¾ miles, grading 35 rods, ditching 70 rods, corduroying 16 rods and building 1 wooden culvert.

Cane and Bryce Boundary East from Lot 12.—One mile of new road was graded, 15 rods ditched, 200 rods corduroyed and 2 wooden culverts built.

Casey Township, Cons. 1 *and* 2, *Lots* 3 *and* 4.—The overseer on this work met his death in the fire which passed over this district during August. He had been working only a short time, so there was not much work done on the road.

Casey and Brethour Townline, from Lot 6 *to Blanche River.*—One and three-quarter miles of old road were improved by grading ¾ miles, ditching 2 miles and gravelling 1½ miles.

Casey and Harley, across Con. 5.—One mile of new road was graded and ditched on each side, and 1 wooden culvert and 1 wooden bridge built.

Dymond Township, Cons. 4 *and* 5, *North Road and West.*—Four miles of old road were improved by renewing 6 cedar culverts, grading 40 rods, gravelling 155 rods and ditching 25 rods.

Dymond Township, Lake Shore Road and East Road.—One mile of old road was improved by making an earth fill of 3,520 cu. yds., and gravelling 218 rods.

Dymond Township, Lots 2 and 3, across Con. 5.—One mile of new road was chopped and cleared and 230 rods stumped, grubbed and ditched.

Firstbrooke Township, Lots 8 and 9, Cons. 5 and 6.—One mile of new road was cleared, stumped and grubbed, 200 rods graded, 6 wooden culverts and 2 wooden bridges built, one bridge had a span of 69 ft., and the other a span of 67 ft.

Harley Township, Lots 3 and 4, Cons. 2 and 3.—One mile of new road was constructed by clearing, stumping and grubbing ¾ miles, grading and ditching 1 mile, and building 5 wooden culverts.

Harley and Casey Townline.—One mile of new road was cleared, stumped, grubbed and ditched.

Harris, Main Road, Lots 2 and 3, Con. 5.—Gravel was spread on 200 rods of this road.

Harris Township, Main Road, Lots 2 and 3, Con. 4 and part of 5.—Gravel was spread on 200 rods of this road.

Henwood Township, Con. 4, east boundary west to line between Lots 6 and 7.—Three miles of old road were improved by grading 2 miles, putting in a new ditch 1 mile, building 4 wooden culverts, making earth fills 440 cu. yds., and a washout filled with 611 cu. yds. of earth, and banked on the side with logs to prevent further washing out.

Henwood Township, Con. 5, Lots 4 and 5.—One-half mile of new road was cleared, stumped and grubbed, 1 wooden culvert built and an earth fill of 325 cu. yds. made.

Henwood Townhsip, Con. 4.—A rock cut 48 cu. yds. was made and a fill of earth and stone of 140 cu. yds. walled up on one side.

Henwood Township, Lots 10 and 11, from Con. 3.—One-half mile of new road was stumped, grubbed and graded, 2 wooden bridges, span 16 ft., built and an earth cut and fill of 2,573 cu. yds. made.

Henwood Township, Con. 4.—A rock cut 48 cu. yds. was made and a fill of half miles of new road were opened up, ½ mile of which was cleared, 1½ miles stumped and grubbed, 280 rods graded and 4 wooden culverts built.

Henwood Township, Lots 2 and 3, Con. 4.—One mile of new road was opened up, ¾ miles being cleared, stumped and grubbed, 300 rods graded and 2 wooden culverts built.

Hilliard Township, Lots 10 and 11, Con. 5.—One mile of new road was ploughed and graded, 1 wooden culvert built and 2 outlet ditches dug, one 30 rods and the other 68 rods.

Hilliard and Harley Townline, from Lot 9 to Blanche River.—One and one-half miles of old road were improved by corduroying 1 mile, gravelling 154 rods and spreading clay on 67 rods.

Hilliard and Brethour Townline, from Con. 2, north.—A new road 142 rods in length was cleared, stumped and grubbed.

Hudson Township, Lots 6 and 7, Con. 4.—One mile of old road was repaired by gravelling 265 rods, building 1 wooden culvert and making an earth fill of 83 cu. yds.

Hudson and Kerns Townline, Lots 3 and 4.—Three-quarter miles of old road were improved by surfacing 120 rods with crushed stone, building a wall of cedar 100 ft. long and 4 ft. high to hold a fill, and making a cut on hill and a fill below of 779 cu. yds. of stone and gravel.

Hudson Township, Con. 6, Lots 8 and 9, and Cons. 5 and 6.—One and one-

half miles of old road were graded, 1 mile surfaced with gravel and ½ mile crowned with crushed stone.

Hudson Township, Cons. 5 and 6, Lots 4 and 3, and north between Lots 2 and 3.—Three-quarter miles of old road were graded, 100 rods gravelled and 80 rods crowned with crushed stone.

Ingram Township, Lots 2 and 3, Cons. 1 and 2.—One mile of new road was chopped and cleared, 190 rods of it stumped and grubbed and ½ mile ditched.

Ingram and Hilliard Townline.—One mile across lots 11 and 12 was improved by being surfaced with clay, ditching 60 rods, making an earth fill 412 cu. yds., and putting a new covering on a bridge.

Kerns Township, Cons. 4 and 5, Lots 7 and 8.—One-half mile of old road was improved by grading 100 rods and making an earth cut and fill of 1,120 cu. yds..

Kerns Township, Cons. 5 and 6, Lots 9 and 10.—One mile of old road was improved by grading 168 rods, building 1 wooden culvert and 2 wooden bridges, and making an earth cut and fill of 5,026 cu. yds.

Kerns Township, Cons. 4 and 5, across Lot 2.—One-half mile of new road was stumped, grubbed, graded and ditched on both sides, and an earth fill of 75 cu. yds. made.

Tudhope-Barber, from Leeville north, Lots 2 and 3.—One and one-quarter miles of new road were cleared and underbrushed 40 ft. wide, 1 wooden culvert built and 28 rods ditched.

TEMISKAMING BY-LAWS.

Bucke By-law No. 198.—Road No. 1, Lake Shore Road from Haileybury to Dymond township, 4½ miles of old road were graded, 40 rods surfaced with earth and 1 wooden culvert built. Road No. 2, between Cons. 3 and 4, from Haileybury to Flemming's Corner, 4 miles were graded and an earth fill of 18 cu. yds. made. Road No. 3, between Cons. 3 and 4, from Flemming's Corner to Firstbrooke township, 2 miles were improved, 1 mile being graded, ½ mile surfaced with clay and ½ mile gravelled. Road No. 4, between Cons. 4 and 5, across lots 5 and 6, 1 mile was graded and the ditches cleaned on both sides. Road No. 5, between Cons. 2 and 3, across lots 9 and 10, ½ mile of new road was stumped and grubbed, 140 rods graded and boulders removed from 20 rods. Road No. 6, between lots 4 and 5, Cons. 4 and 5, 2 miles were graded 22 ft. wide. Road No. 7, between lots 6 and 7, across Cons. 4, 5 and 6, gravel was spread on 3 miles.

Casey By-law No. 39.—Road No. 2, Casey and Harris boundary across lots 1 and 2, ½ mile of new road was stumped and grubbed, ploughed and graded. Road No. 3, on Con. 2, across lots 1 and 2, 80 rods of new road were cleared, stumped, grubbed and ditched. Road No. 4, between lots 4 and 5, across Con. 3, ½ mile of new road was cleared, stumped and grubbed. Road No. 5, on Con. 3, across lots 4, 5 and 6, 20 rods of new road were cleared and ditched on both sides, and 40 rods of an old outlet ditched, cleaned and deepened. Road No. 6, on Con. 4, across lots 1, 2 and 3, 1½ miles of old road were improved by removing 80 rods of burnt corduroy, grading 1 mile, surfacing with earth ½ mile, and cleaning 80 rods of ditch. Road No. 7, on Con. 5, across lots 5 and 6, 180 rods of new road were cleared and ditched, and an outlet ditch 40 rods in length dug. Road No. 8, of Con. 5, across lots 1, 2 and 3, 1½ miles of old road were improved by making general repairs, building 2 wooden culverts. Road No. 9, on Con. 6, across lots

1, 2 and 3, 80 rods were improved by removing 12 rods of burnt corduroy, stumping and grubbing 12 rods, surfacing with earth 40 rods, ditching 40 rods and making a clay fill of 118 cu. yds. Road No. 10, on Con. 6, across lots 4 and 5, and between lots 3 and 4, across Con. 6, 1½ miles were ploughed and graded, 10 rods corduroyed, 30 rods ditched, 1 wooden culvert built and an earth fill of 133 cu. yds. made. Road No. 11, between lots 6 and 7, from Con. 5 north, 200 rods were ploughed and graded. Road No. 12, on Con. 6, from Wright's Creek to the Provincial boundary, 180 rods were ploughed and graded, and ½ mile of new road chopped, cleared and under-brushed. Road No. 14, from Judge to Pearson Road, ½ mile was graded and gravelled. Road No. 15, between lots 6 and 7, from Moose Creek, Pearson, 230 rods were surfaced with gravel. Road No. 16, on Con. 2, from lots 6 to 9, 200 rods were ditched. Road No. 17, on Con. 3, across lots 7 and 8, 100 rods were surfaced with gravel. Road No. 18, Casey-Harris boundary, across lots 7 and 8, 1 mile of old road was stumped and grubbed 33 ft. wide. Road No. 19, on Con. 5, from Wright's Creek east to the Provincial boundary, ½ mile of new road was cleared and under-brushed, 60 rods stumped and grubbed, and 80 rods ditched. Road No. 20, on Con. 4, from Wright's Creek east, ½ mile was graded and 60 rods ditched. Road No. 21, on Con. 2, across lots 9, 10 and 11, 180 rods of new road were cleared, 80 rods grubbed and ditched.

Dymond By-law No. 141.—Road No. 1, between lots 7 and 8, across Con. 1, 1 mile was improved by grading 40 rods and making an earth fill of 332 cu. yds. Road No. 3, between Cons. 1 and 2, from Hudson boundary to the West Road, 2 miles of old road were graded and an earth fill of 100 cu. yds. made. Road No. 4, between Cons. 2 and 3, east from the Hudson boundary, 1¼ miles of old road were improved by stumping and grubbing 60 rods, grading 1 mile, gravelling 92 rods, and building 2 wooden culverts. Road No. 5, between Cons. 3 and 4, lots 5 and 6, 1 mile was improved by grading ½ mile, and making an earth fill of 137 cu. yds. Road No. 6, between Cons. 4 and 5, east from the Hudson boundary, ¾ miles were graded, 20 rods gravelled, 6 wooden culverts built, and an earth fill of 125 cu. yds. made. Road No. 7, between Cons. 5 and 6, west from the Harris boundary, 1 mile of new road was stumped, grubbed and ploughed ready for grading. Road No. 8, between Cons. 5 and 6, east from the Wabis River, 3½ miles of old road were improved by being graded, surfacing 20 rods with clay, building 3 wooden culverts and making an earth fill of 146 cu. yds. Road No. 9, between Cons. 4 and 5, west from the Harris boundary, 1 mile of old road was graded and ½ mile of new road opened up by clearing, stumping, grubbing and ditching 109 rods, grading ½ mile, and building 1 wooden culvert. Road No. 10, Hudson and Dymond boundary, Cons. 4 and 5, 1¼ miles of old road were improved by grading 1 mile, ditching 63 rods, building 1 wooden culvert and making an earth fill of 100 cu. yds. Road No. 11, between lots 2 and 3, con. 4, 1 mile was graded, 1 wooden culvert built and 1 wooden culvert repaired. Road No. 12, River Road, to Uno Park, 1¾ miles of old road were improved by grading 1¼ miles and making an earth fill of 37 cu. yds., where corduroy had been burned out. Road No. 13, between lots 6 and 7, across Con. 4, ½ mile of old road was improved by grading 20 rods, building 3 wooden culverts and making an earth fill of 137 cu. yds. Road No. 14, North Road from New Liskeard to Harley, 4½ miles were graded and 3 cedar culverts built. Road No. 15, Harris-Dymond boundary, 3 miles were improved by grading 2 miles, gravelling 47 rods, building 1 wooden culvert and repairing a wooden bridge. Road No. 16, West Road from New Liskeard to Hudson boundary, 3 miles were improved by grading 1 mile, gravelling 103 rods,

building 1 wooden culvert and digging an outlet ditch 6 rods. Road No. 17, East Road, from New Liskeard to Harris boundary, ½ mile was improved by building 2 cedar culverts and making earth cuts and fills 90 cu. yds. Road No. 18, between lots 10 and 11, across Cons. 3, 4, 5 and 6, 3 miles were improved by ploughing and grading ½ mile and grading 2½ miles. Road No. 19, Lake Shore Road, lots 11 and 12, ½ mile of new road was constructed by clearing, stumping, and grubbing 107 rods, grading 157 rods, ditching 130 rods, and making an earth fill 200 cu. yds. Road No. 20, West Road, lot 7, 79 rods were surfaced with gravel. Road No. 21, Harley and Dymond boundary, 2 miles were improved by grading 95 rods, gravelling 30 rods and ditching 130 rods.

Harris By-law No. 45.—Road No. 1, from the Provincial boundary to the White River, ½ mile of new road was cleared, stumped, graded and ditched. Road 2, between lots 2 and 3, across Con. 6, 1 mile was improved by building 3 wooden culverts and making 2 earth fills, totalling 1,220 cu. yds. Road No. 3, Harris and Dymond boundary, 1¾ miles were graded, 1 wooden culvert built and a wooden bridge repaired. Road No. 4, between lots 6 and 7, south from the north boundary, 1 mile was worked over, 40 rods being gravelled, 180 rods ditched and 1 wooden culvert built. Road No. 5, between lots 2 and 3, Con. 3, 1 mile was improved by spreading gravel, ditching ½ mile and building 3 wooden culverts.

Hilliard By-law No. 74.—Road No. 1, between lots 10 and 11, across Con. 4, 1 mile of new road was cleared, stumped, grubbed, graded and ditched on both sides and 3 wooden culverts built. Road No. 2, between lots 4 and 5, across Con. 5, 1 mile of new road was cleared, stumped and grubbed and 1 wooden culvert built.

Hudson By-law No. 53.—Road No. 1, between lots 2 and 3, across Cons. 5 and 6, 1 mile of old road was improved by gravelling 115 rods, building 3 wooden and 1 concrete culverts, and making an earth fill of 113 cu. yds. Road No. 2, between lots 4 and 5, across Cons. 5 and 6, 2 miles were graded, 140 rods gravelled, and an earth fill of 43 cu. yds. made. Road No. 3, between Cons. 4 and 5, across lot 7, 40 rods were gravelled, 3 wooden culverts built, and an earth fill of 43 cu. yds. made. Road No. 4, between Cons. 1 and 2, across lots 2 and 3, 1 mile of old road was improved by making general repairs and building 4 wooden culverts.

Kerns By-law No. 135.—Road No. 1, between Cons. 1 and 2, lots 10 to 12, ½ mile was graded and an earth fill of 1,588 cu. yds. made. Road No. 2, between lots 8 and 9, across Cons. 2 and 3, 2 miles 100 rods were graded, 40 rods surfaced with earth, 1 mile ditched and an outlet ditch 20 rods dug. Road No. 3, between lots 2 and 3, across Cons. 2 and 3, 1 mile was improved by stumping and grubbing 20 rods, grading 140 rods, ditching ½ mile, and making an earth fill of 111 cu. yds. Road No. 4, Hudson and Kerns boundary, lot 2, ½ mile of old road was improved by ditching 12 rods, and making a gravel fill of 116 cu. yds. Road No. 5, Hudson and Kerns boundary, lots 6 and 7, an earth fill of 390 cu. yds. was made. Road No. 6, between lots 6 and 7, across Con. 4, ½ mile of new road was opened up by grading 20 rods, building 2 wooden culverts, and making an earth fill of 433 cu. yds. Road No. 7, between Cons. 4 and 5, across lots 5 and 6, 80 rods of new road were stumped, graded and ditched, and 1 wooden culvert built. Road No. 8, between lots 10 and 11, across Con. 5, ½ mile of new road was stumped and grubbed, 30 rods graded and 3 wooden culverts built. Road No. 9, Kerns and Henwood boundary, Cons. 5 and 6, 2 miles were graded, 9 wooden culverts built and an earth fill of 258 cu. yds. made. Road

No. 12, between lots 4 and 5, across Con. 5, 1 mile was improved by ditching ¾ miles and surfacing ¼ mile with earth. Road No. 13, between Cons. 4 and 5, lots 9 to 12, 2 miles of old road were improved by grading 1 mile and making an earth fill of 573 cu. yds. Road No. 14, between lots 4 and 5, from Cons. 2 to 6, 1 mile was improved by cleaning and deepening the ditches, building 1 wooden culvert and making an earth fill of 811 cu. yds.

TRUNK ROADS.

Blair and Mowat Townships, Mowat Station to Stumpy Bay Main Road.—A new riad from Mowat Station to Lost Channel has been chopped out, stumped and made ready for operations next year. The road is cleared 33 ft. wide 6 miles, and the location has been very well selected, as there are no hills of any account. A very uniform grade can result when the road is graded and crowned up.

Bridgland Trunk Road.—Work on this road consisted of stumping and grading 4½ miles, which were cut out and logged during the previous season. Included, also, in this were 12 rods of corduroy and 14 culverts. Some repairs were also made on the western portion of the road built in 1913. The teams for this work were supplied gratis by the Beck Lumber Company and the Thessalon Lumber Company.

Bruce Mines, Rydal Bank and Westerly Trunk Road.—One and one-half miles of road were graded and gravelled and 400 yds. of trap rock laid, 3 culverts were installed, one 9 ft. wide and two smaller ones. It was necessary to bring the bulk of the gravel by car on the Bruce Mines and Algoma Central Railway, as no gravel was obtainable in the vicinity of the road. The trap rock portion was laid on the southerly end of the road. The road is now in satisfactory condition.

Goulais Bay and Bellevue Station Trunk Road.—This road was improved 5½ miles by chopping and clearing 30 rods, grading 5 miles, spreading 965 yds. of gravel on 1 mile, building 1 stone culvert and making several cuts and fills, totalling 1,452 cu. yds.

Gowganda Trunk Road.—On the first mile of this road, ½ mile was stumped, grubbed, graded and crowned 30 ft. wide and ditched on both sides, 2 wooden culverts having stone ends were put in, and a stone fill of 40 cu. yds. made. From Mile 2½ to Mile 3½, general repairs were made, 200 rods being ditched and graded. From Mile 3½ to Mile 4½, a diversion around 4 hills was made, 200 rods being cleared, stumped and grubbed, graded and ditched, and 6 wooden culverts put in. From Mile 4½ to Mile 5, boulders were removed and 8 rods ditched and graded. At Mile 4¾, a bridge was repaired by putting in new stringers and cedar covering. On Mile 7, a new bridge, 16 ft. span, having stone abutments, was built, the bridge is 14 ft. wide and has a spruce railing on each side; a second bridge has a few pieces of new covering placed on it, and a washout 10 yds. in length was repaired. From Mile 7½ to Mile 15, 3 new culverts were put in. On Mile 14, a bridge was covered and a ditch 12 rods in length opened, and a fill of 20 cu. yds. made. Just before Sage's, the old bridge which had 67 ft. of covering was removed, and a new bridge having stone piers, cedar stringers and spruce railing, a span of 18 ft., and a fill at each end was placed a little to the west of the old bridge. This new bridge is 9 ft. clear of the water. From the above bridge to Sage's, boulders were removed and some small amounts of grading done. From Sage's to Gowganda, very little work was done, except the removing of fallen

trees from the road after the fire which occurred about the 10th of August. The bridge near the Beaver dam was repaired by putting on a few new pieces of covering.

Iron Bridge and Northerly Trunk Road.—The work done consisted of, first the construction of ¼ mile of new road by which means a 17 per cent. grade on Arnold Hill was reduced to a maximum of 6 per cent.; second, the cutting of 5 ft. from the top of a hill 1 mile north of Ironbridge, by means of which 15 per cent. of a grade was reduced approximately 10 per cent.; third, the grading of ½ mile of road between these hills, including the construction of some small necessary outlet ditches; fourth, the construction of 12 cedar culverts.

Loon Lake Trunk Road.—The new road, 1½ miles in length, was chopped and cleared and 180 rods of it stumped, grubbed and surfaced with earth and 1 cedar culvert built.

Macaulay Township, Bracebridge-Baysville Road.—The new road opened up last year was improved 2½ miles by doing considerable blasting, removing old crossway logs, clearing out a creek, grading 200 rods and putting 400 loads of gravel and earth and 25 loads of broken stone on it, and building 2 wooden culverts.

McLean Township, Bracebridge-Baysville Road.—Four and one-half miles of this road were improved by brushing out the sides 1½ miles, grading 2½ miles, removing boulders and stumps, gravelling 300 rods, putting in 4 new culverts and repairing 6 old culverts.

Moss Township Trunk Road.—One and one-half miles of old road were stumped, grubbed, graded, gravelled and ditched on both sides. A new road 3¾ miles in length was cleared, stumped, grubbed, graded and surfaced with earth and 4 tamarack culverts built.

Oliver and McIntyre Trunk Road.—The work was just commenced on this road, 15 rods being gravelled, when it became impossible to get men to finish the work.

Sheridan Trunk Road.—A new road 2½ miles in length was cleared, stumped, grubbed, graded and surfaced with gravel and clay, 10 wooden culverts and 1 wooden bridge having a span of 120 ft. were built, 3 offtake ditches dug and 28 rods of corduroy laid and covered with gravel.

Sioux-Lookout Trunk Road.—Two and one-half miles were stumped, grubbed, graded and surfaced with clay and gravel, also ditched, 10 wooden culverts and 2 wooden bridges were built, 200 rods of corduroy laid and covered with clay, 2 hills were cut down and 4 offtake ditches constructed.

Sudbury-Soo Trunk Road.—Copper-Cliff to Naughton Section, early in the season 6 miles were improved in necessary places by repairing culverts, grading and gravelling, and towards the end of the year 1 mile was improved near Copper Cliff by making 3 stone fills, totalling 100 cu. yds., repairing 2 culverts and spreading gravel 1 load deep ½ mile. Copper Cliff-Sudbury Section, commencing at the boundary of Sudbury town, the road was surfaced 15 ft. wide with tarvia, a contract for 5,333 sq. yds. at 75 cents per sq. yd., with a three-year guarantee was completed. The work appears neatly and well done. Espanola-Nairn Section, the work extended from the Algoma Central Railway spur leading to the C. P. R., to the bridge over the Spanish River. On these 5 miles of road, 4 fills were made at different culverts, and stone walls built at the ends, the fills amounting to 100 cu. yds.; clay was hauled and spread on ¾ miles, and then covered with gravel 2

loads deep at the places on the road where there was not very good drainage. At two different places on the road, the grader was used, and the road graded up a total distance of ¾ miles. Gravel was spread on the rest of the road 1 load deep. Both sides of the road were cleared out and the brush piled about 25 ft. from the centre of the road. The work has been well done, and already the gravel is packing down to a firm surface. Espanola-Webbwood Section, 1½ miles were surfaced with 950 yds. of gravel, ½ mile of this was regraded, a few washouts were repaired. Spanish River Bridge, the north approach to this bridge was improved by building a cedar railing and painting it, also by surfacing with gravel 40 rods. The cedar railing was placed on a steep side hill cut which had been badly washed out in the Spring.

STATEMENT OF EXPENDITURE

ON

COLONIZATION ROADS AND BRIDGES

FOR THE YEAR 1916

SUMMARY OF EXPENDITURE ON COLONIZATION ROADS IN THE YEAR 1916.

NORTH DIVISION.

Name of Road.	Expenditure.
Allan Township, 10th Con.	$75 49
Allan (Unorganized part)	208 38
Assiginack Township Roads:—	
Hembruff Section	100 00
Sims Section	99 85
Hembruff Section	100 00
F. McCaulay	101 38
W. McCaulay	100 00
John Ingram	100 61
Assiginack Township, Lot 6, Con. 14	99 43
Aubrey Township Roads	296 42
Aweres and Pennefather Townships, Goulais Bay to Heyden	975 41
Awrey Township Roads	350 25
Balfour Township Roads	300 00
Barrie Island, Lots 16 and 17, Con. 5	200 00
Barrie Island Road, McKeown's Hill to Bridge	97 82
Basswood Lake Road, east end	349 99
Bidwell Township, 10th Con., Lots 20 to 25	150 75
Bidwell and Billings Townline, Cons. 2 to 4	150 00
Billings Township Roads:—	
Foster Section	200 00
Dearing Section	99 09
Ednie Section	199 58
Bailey Section	99 98
Richard's Section	100 00
Blezard Township Roads	200 00
Bright Township, Con. 4	494 28
Broder Township Roads:—	
Kelly Lake Road	150 00
McFarlane Lake Road	150 25
Potvin Road	52 00
Lots 11 and 12, Con. 5	149 50
Campbell Township, 2nd Con.	147 40
Campbell Township, 10th Con., 20th to 25th Sideroad	200 00
Campbell and Mills Townline	100 00
Campbell Township, 10th Con.	150 00
Campbell Township, 12th Con.	149 51
Campbell Township, 8th Con. Head's Corner	74 50
Campbell Township, Perivale Road	150 93
Campbell Township, Griffith's to Head's	100 00
Capreol Township Roads:—	
Road and Bridge, Con. 2	201 34
Repairing Hill, Con. 3	201 41
Carnarvon Township, 2nd Con.	100 00
Chapleau Township Roads	500 00
Cockburn Island Roads	151 08
Cuthbertson Location, Con. 7	300 00
Cuthbertson Road north from C. P. R. Track to Con. 7	300 00
Dawson Township Roads	500 00
Day Township Roads	300 00
Dill Township Roads	100 00
Dorion Township Roads	1,006 15
Eton Township Roads	295 90
Fairbanks Township Roads	250 00
Falconbridge and Garson Boundary Road	277 00
Garson Township Roads	198 20
Gillies Township Roads	501 64
Gladstone and Patton Boundary	300 65
Gordon and Allan Municipality Roads:—	
Vanmeer Section	201 04
Ouillette Section	201 33
Batty Section	166 33
McDougall Section	50 00

Name of Road.	Expenditure.
Turner Section	50 25
Peterson Section	100 00
Milligan Section	99 99
Gordon Lake and Rock Lake Road	550 55
Gorham Township Roads	2,066 72
Hagar Township Roads:—	
Lots 10 and 11, Con. 4	99 82
Lots 3, 4, 5 and 6, Con. 5	99 65
Lot 8, Cons. 4 and 5	52 00
Lots 3 and 4, Con. 4	45 00
Lots 8 and 9, Con. 5	100 00
Lots 12 and 13, Con. 5	107 00
Lots 13 and 14, Cons. 5 and 6	101 25
Lots 12 and 13, Con. 2	100 00
Lots 12, 13 and 14, Cons. 1 and 2	100 00
Lots 12 and 13, Con. 3	100 95
Hallam Township Roads	300 00
Hanmer Township Roads	200 00
Harrow Township Roads	300 00
Hartman Township Roads	199 55
Hawley Township from Lake Neopwasa	536 20
Hilton Township, Cons. Q and R	299 42
Howland Township, 9th Con. to old Government Road (Townline)	99 94
Howland Township, Moses Burnett's Hill on Townline	150 00
Howland Township, 11th Sideroad, 9th Con. to Main Road	99 85
Ignace Township Roads	175 00
Iron River Road	250 75
Jocelyn Township, Con. 0	200 00
Johnson Township, Con. 6	249 98
Kagawong to Ice Lake	149 99
Kaministikwia Road	499 55
Kirkwood Township Roads	304 79
Laird Township, C.P.R. Station to Black Creek	250 00
Lefroy Township Roads	299 45
Lorne Township Roads	99 98
Louise Township Roads	196 37
Lumsden Township Roads:—	
Con. 1	176 50
Lots 1 and 2, Con. 1	74 75
Lybster Township Roads	499 62
Machin Township Roads	175 00
Marks Township Roads	498 99
McKinnon Township Roads	300 37
Melgund Township Roads	300 00
Merritt Township Roads:—	
Desjardin Section	97 50
Lauthier Section	198 30
Mills, 10th Sideroad, Cons. 6 to 8	150 00
Mills Township, Road from School West	91 28
Morgan Township Roads	202 54
Mutrie Township Roads	299 57
Myers West to Main Road	149 85
Nairn Township Roads	100 00
Neelon Township Roads	100 00
Newhouse to Providence Bay	198 10
Nipigon Township Roads	303 30
Parkinson and Mississauga Road	299 95
Patton Township Roads	249 62
Pearson Township Roads	499 05
Plummer Additional Road	299 98
Poplar to Gore Bay	150 00
Rock Lake to Cranston's Creek	350 00
Rydal Bank Road, northerly	300 00
St. Joseph Township between Cons. I and K	101 21
St. Joseph Township, D. Line	300 00
Sandfield Township, Cons. 8 and 9, Lots 18 and 19	99 87

Name of Road.	Expenditure.
Sandfield Township, Lot 11, Con. 10	149 08
Sandfield Township, 2nd Con. to Sandfield Mills	150 00
Sandford Township Roads	300 00
Schreiber Township Roads	399 95
Scoble Township Roads	500 00
Shakespeare Township, Centre Line	299 66
Sheguiandah Township, 10th Con. front of Lot 20	50 00
Sheguiandah Township, Dunlop Hill	194 50
Sheguiandah Village to Reserve	198 85
South Bay Mouth, Green's Road	75 00
Southworth Township Roads	250 00
Spanish-Walford Road, Section A	306 90
Sterling Township Roads	250 56
Strange Township Roads	450 00
Striker Township, Ritchie's Hill	149 89
Striker Township Roads	320 00
Sylvan Valley and Bar River Road	200 00
Tarentorous and Aweres Townships, Island Lake Road	500 00
Tehkummah Township, Lot 8, Con. 4	101 40
Tehkummah Township, 15th Sideroad South of 4th Line	99 55
Tehkummah Township, 6th Line, Lots 11, 12 and 13	111 50
Tehkummah Township, Government Road, Lots 31 and 32	100 00
Tehkummah Township, 10th Sideline, 4th to 6th Line	199 72
Tehkummah Township, 2nd Line 15th Sideline to 20th Line	200 00
Tehkummah Township, Con. 6 from A and B	100 00
Tehkummah Township, Bennett's Hill	99 99
Temple Township Roads	300 00
Thessalon Township from Broughton's Corner	150 76
Thessalon Township, Section 26	300 00
Thompson Township Roads	300 00
Tunnel Bridge Road	300 00
Umbach Township Roads	250 00
Vankoughnet Township, Sections 21, 22 and 28	497 39
Vankoughnet Township, Road to serve Section 39	250 00
Vankoughnet Township, Section 20	499 50
Victoria Township Roads	400 00
Wabigoon Township Roads	399 26
Wainwright Township Roads	400 90
Walford-Spanish Road, Section B	300 00
Ware Township Roads	1,188 24
Waters Township Roads:—	
Lots 6 and 7, Con. 4	100 00
Finn Settlement Road, Lots 6 and 7	50 00
Fielding Road, Lots 2 and 3	45 00
Government Road	50 00
Waters Township (Neva Road)	250 00
Wells Township Roads	300 00
Zealand Township Roads	300 00

NORTH DIVISION BY-LAWS.

Alberton By-law No. E	999 83
Atwood By-law No. 87	442 50
Assiginack By-law No. 376	400 00
Balfour By-law No. 46	600 00
Billings By-law No. 227	500 00
Blezard By-law No. 75	250 00
Blue By-law No. 24	405 00
Burpee By-law No. 63	238 00
Chapple By-law No. 209	2,200 00
Conmee By-law No. 26	578 73
Dilke By-law No. 72	485 00
Drury, Denison and Graham By-law No. 151	1,300 00
Emo By-law No. 200	2,170 59
Gordon By-law No. 138	497 47

Name of Road.	Expenditure.
Howland By-law No. 114	500 00
Jaffray and Mellick By-law No. 72	600 00
Johnson By-law No. A64	199 88
Korah By-law No. 138	2,868 92
Laird By-law No. 111	425 00
Lavallee By-law No. 154	1,903 75
Morley and Pattullo By-law No. 144	1,500 00
Neebing By-law No. 348	1,750 00
Oliver By-law No. 166	1,000 00
Paipoonge By-law No. 141	1,000 00
Plummer Additional By-law No. 146	675 00
Prince By-law No. 57	445 13
Rayside By-law No. 150	500 00
Sandfield By-law No. 214	200 00
St. Joseph By-law No. 417	750 00
Shuniah By-law No. 413	3,343 24
Tarbutt and Tarbutt Additional By-law No. 6	199 93
Tarentorus By-law No. 158	1,651 17
Thessalon By-law No. 14	311 05
Thompson By-law No. 106	150 00
Worthington By-law No. 72	600 00

MAINTENANCE AND REPAIRS.

Burpee Township Roads:—	
Hurdle Section	100 00
Martin Section	100 00
Bailey Section	100 00
A. Campbell Section	102 23
C. Campbell Section	99 30
Gibson Section	100 00
Burns Section	150 00
Burpee to Meldrum Bay	600 00
Christlaw Road	150 00
Kerr's Road Repairs	528 03
Laird and McDonald	112 40
Long Bay to Gore Bay	333 39
Montgomery Bridge Road	500 94
Nairn Township, repairing bridge	57 50
Poulin Road	200 00
Robinson Township Roads	198 73
Indian Point Bridge repairs	47 10
St. Joseph F and G Road	146 60
Thessalon Township, Con. 6	200 79
White Pennell Road	500 00

TRUNK ROADS.

Bridgeland Trunk Road	2,500 00
Bruce Mines, Rydal Bank and Westerly Trunk Road	1,500 00
Goulais Bay and Bellevue Station Trunk Road	1,950 00
Iron Bridge and Northerly Trunk Road	2,499 66
Loon Lake Trunk Road	980 68
Moss Township Trunk Road	600 00
Oliver and McIntyre Trunk Road	26 25
Sheridan Trunk Road	950 00
Sioux-Lookout Trunk Road	997 96
Sudbury-Soo Trunk Road:—	
Mile 42 to 44	1,550 00
Sudbury-Copper Cliff	3,599 77
Espanola-Webbwood	2,690 50
Nairn Centre Section	268 13
Espanola Hill	152 77
Spanish-Cutler Section	10 30
Nairn-Espanola Section	2,989 46
Copper Cliff and Naughton	579 05
Webbwood-Espanola	1,400 10

MISCELLANEOUS.

Name of Road.	Expenditure.
Carnarvon By-law No. 290, 1915	500 00
Chapple By-law No. 143, 1915	2,513 50
Jaffray and Mellick By-law No. 64, 1915	600 00
Korah By-law No. 127, 1915	3,000 00
McIrvine Municipality *re* By-law, 1913	1,923 48
Wabigoon Road, 1913, W. J. Moffitt	30 00
Barrie Island Road, balance 1915	7 50
Kenora District Road Machinery	45 33
W. H. Munro, Storage of Road Machinery, Soo District	36 00
John McNee, Storage of Road Machinery, Fort William District	36 00
Timiskaming and Northern Ontario Railway, rent of Storehouse Site, Porcupine District	15 00
Basile Ethier, Inspection, 1915	163 35

SURVEYS AND LOCATIONS.

J. S. Leitch, Montgomery Road, Galbraith Township	206 20
J. S. Leitch, plotting roads	143 95
J. S. Leitch, plotting roads	72 00
C. H. Meader	73 00
Edmund Segar	45 12
John L. Lang	521 71
Inspection, North Division	3,510 65

WEST DIVISION.

Armour Township, between Lots 10 and 11, across Cons. 3 and 4	300 00
Baxter Township from Lot 20, Con. 10 to Lot 15, Con. 9	100 00
Baxter Township, Port Severn School Road	100 00
Bethune Township, Con. 12, Lots 19 to 25	251 15
Bethune Township, between Lots 10 and 11	201 10
Brunel Township, Huntsville-Baysville Road	197 71
Carling Township from Killbear Road to Deep Bay	204 50
Carling Township, from Lot 16, Con. 2 to Lot 7, Con. 1	500 00
Chaffey and Stisted Townships, Huntsville to Aspdin	200 00
Chapman Township, north boundary, Lot 9 to 18	200 00
Croft Township, Lot 12, Con. 8	252 69
Franklin Township, road on the Southern Peninsula	201 16
Gurd Township, between Cons. 6 and 7, across Lots 11 to 15	285 25
Gurd Township, between Cons. 2 and 3, across Lots 19 to 25	400 00
Himsworth North Township, between Cons. 24 and 25	182 57
Himsworth North Township on Con. 22	201 82
Himsworth South Township, Cons. 2 and 3	299 80
Humphrey Township, Alexander's Hill	518 25
Lindsay Township, Bury Road	300 00
Lount Township, between Cons. 12 and 13	249 72
Lount Township, continuation of road between Cons. 1 and 2	300 00
Machar and Gurd Townships, between Lots 25 and 26	300 99
MacKenzie and Burton Townships, Whitestone Valley Road	299 63
Matchedash Township Roads	100 63
McKellar and McDougall Townships between Waubamic Station and McKellar	496 62
Medonte Township Roads:—	
Sideroad 5 and 6, Con. 10	80 00
Sideroad 20 and 21, Cons. 12 and 14	140 00
Con. 5, Lots 21 and 22	80 00
Medora Township, between Lots 30 and 31	200 25
Mills Township from Lots 25 to 15	300 00
Monteith Township, Lot 33, Con. 11	175 00
Monteith and McMurrich Townships, Monteith and Perry Road	201 43
Orillia Township Roads:—	
Con. 4, Lot 3	200 00
Sideroad 15 and 16, Cons. 4 and 5	200 30
Townline Orillia and Matchedash	100 00
Pringle Township, Great North Road	350 00

Name of Road.	Expenditure.
Pringle and Mills Townships, Cons. 8 and 9	298 02
Sinclair Township from Lot 14, Con. 6 to Lot 9, Con. 8	70 84
Stisted Township, Hood Road, Cons. 8 to 12	304 61
Strong Township, 10th Con., Pinkerton's Hill	252 08
Strong Township, 10th sideroad, Cons. 12 and 13	300 00
St. Edmund's Township, Bury Road	300 00
Tay Township Roads	159 85
Tiny Township, opposite Lots 85 and 90, Con. 2	500 00
Vespra and Sunnidale Townline	213 87
Wilson Township, Loring-Salines Road	400 00
Wood Township, road between Bala and Sahanatien Village	296 85
By-laws.	
Albemarle By-law No. 542	750 00
Amabel By-law No. 174	500 00
Cardwell By-law No. 171	150 00
Chapman By-law No. 6	500 00
Derby By-law No. 12	450 00
Eastnor By-law No. 2	500 00
Keppel By-law No. 8	983 32
Lindsay By-law No. 238	500 00
Machar By-law No. 511	200 00
Matchedash By-law No. 178	95 14
Medonte By-law No. 536	500 00
Medora and Wood By-law No. 302	692 06
Monck By-law No. 428	699 60
Muskoka By-law No. 276	400 00
Oro By-law No. 432	500 00
Orillia By-law No. 928	1,159 87
Sarawak By-law No. 7	375 00
St. Edmunds By-law No. 182	250 00
Stisted By-law No. 218	200 00
Sydenham By-law No. 20	1,000 00
Tay By-law No. 638	500 00
Tiny By-law No. 551	750 00
Vespra By-law No. 581	748 73
Watt By-law No. 488	200 00
Maintenance and Repairs.	
Byng Inlet to Station	305 63
Bracebridge-Parry Sound Road	1,028 10
East Stage Road in Lindsay	297 55
Emsdale and Sprucedale Road	300 00
Trunk Roads.	
Blair and Mowat, Stumpy Bay Trunk Road	1,222 65
McLean Township, Bracebridge-Baysville Trunk Road	500 00
Macaulay Township, Bracebridge and Baysville Trunk Road	500 00
Miscellaneous.	
Eastnor By-law No. 994, 1915	500 00
Orillia By-law No. 917, 1915	700 00
Carling Township Road, Beatty Estate, 1915	14 85
Skeleton Hill Road, balance, 1915	200 00
Mulmur Municipality By-law, balance, 1914	437 02
Inspection West Division	1,681 50
East Division.	
Admaston Township Roads:—	
Renfrew and Shamrock Road	$100 00
Ashdad Road	200 00
Fifth Line Road	100 00
Whalen Settlement Road	101 50

Name of Road.	Expenditure.
Airy Township Roads:—	
Lot 10, Con. 7	103 11
Lot 8, Con. 5	349 60
Sideline 15, Con. 4	250 00
Whitney and Maynooth Road	294 60
Alice Township Roads:—	
Davis Mills Road	113 87
Shady Nook Road	103 74
Con. 16	100 00
Anson and Hinden Township Roads	114 30
Bagot and Blythfield Township Roads:—	
High Falls Road	100 00
Ashdad and Mount St. Patrick	99 50
Calabogie and Lanark Road	100 00
Pultz Hill	50 00
Con. 11 Road in Bagot	60 00
Bancroft and Hermon Road	200 95
Bancroft and Municipality Roads, Grant	250 00
Barrie Township, Cloyne and Masseneau Road	299 86
Bastedo Township Roads	111 00
Bedford Township, Glendower Road	199 82
Bedford Township, from Lot 24, Con. 10	100 00
Bedford Township, between Bedford Mills and Opinicon Station	200 00
Bedford Township, across Lots 23, 24, 25 and 26	100 00
Bedford Mills Road	145 75
Bexley Township Roads:—	
Balsam Lake Road	110 80
Base Line Road	105 79
Bonfield Township Roads:—	
Biset Road	150 00
Sideline, Lots 30 and 31	149 50
Fallow Lake Road	150 00
Boulter Road	101 51
Cons. 10 and 11, Lots 5 and 6	199 94
Lots 5 and 6, Con. 7	150 00
Sideline 15 and 16, Con. 10	100 46
Bromley Township Roads:—	
Caldwell Station Road	299 92
Gorman Section	100 00
Brougham Township Roads:—	
Maloney Mountain Road	151 00
Moore and Graphite Mine Road	150 00
Brudenell and Lyndoch Township Roads:—	
Opeongo Line	100 00
Brudenell Townline	100 00
Lyndoch Road	204 75
Branch Road, Brudenell	100 00
Burleigh Township Roads	600 00
Calvin Township Roads:—	
Sideline 15 and 16, Con. 5	149 90
Sideline 30 and 31, Con. 1	150 39
Lot 35, Con. 6	100 00
Lot 9, Con. 2	99 88
Sideline 10 and 11, Cons. 5 and 6	100 50
Sideline 10 and 11, Con. 4	50 56
Sideline 5 and 6, Con. 3	149 60
Lots 6, 7 and 8, Con. 2	149 11
Papineau and Calvin	49 78
Cameron Township Roads:—	
Lot 30 and 31, Range B	70 00
Lot 4, Con. 24	75 00
Carden Township Roads:—	
First Quarter Line	100 00
Mud Lake Road to boundary	99 56
Cardiff Township Roads	149 76
Carlow Township Roads	202 88

Name of Road.	Expenditure.
Casimir Township Roads	150 00
Chandos Township Roads:—	
Scott Road	83 95
Wellington Road	50 00
Couch Road	49 75
Tanner Road	51 00
Post Road	151 50
Charleston Lake Road	150 00
Chisholm Township Roads:—	
Con. 12, Lot 1	100 00
Con. 16, Lot 20	100 00
Con. 16, Lot 6	100 87
Sideline 25, Con. 10	99 57
Lots 26 and 27, Con. 6	75 00
Sideline 25 between 6 and 8	150 30
Con. 4, Lot 7	75 00
Sideline, Cons. 4 and 2	200 00
Lots 23 and 22, Con. 14	100 00
Clarendon and Plevna Road	175 00
Clarendon, Miller and Ashby Boundary Line	150 00
Cloyne and Kaladar Road	200 00
Clyde Hill Road	199 00
Combermere to Centerview	200 00
Cordova Mines Road	205 03
Crerar Township Roads	154 20
Dalton Township Roads:—	
Monck Road, Head River	100 00
Monck Road, Lot 17, East	99 99
Darling and Lanark Road	199 90
Denbigh Township Roads, Rose Hill Road	198 86
Dummer Township, 9th Line Road	100 00
Dungannon Township Roads	201 21
Elzevir Township Roads	202 78
Escott Road	100 00
Faraday and Herschel Townline	102 00
Ferris Township Roads:—	
Corbeil Road to North Bay	100 00
Sideline 15, Con. 10	100 00
Nosbonsing to Corbeil	75 00
Trout Lake Road to Corbeil	98 94
Nipissing Road to North Bay	74 05
Callandar to Nipissing Junction	49 80
Nosbonsing Lake, Con. 2	76 30
Bonfield and Astorville Road, Con. 1	76 75
Astorville to C. N. R. Station	50 50
Con. 3, 20th Sideline	78 65
Lake Road, Lot 16, Con. 3	75 65
Con. 5, 10th Sideline	52 00
Sideline Con. 1 to Boundary	50 75
Astorville to Ouillette	52 50
Field Township Roads	1,200 00
Fifth Depot and Tamworth Road	150 00
Fraser Township Roads	207 96
Glamorgan Township Roads	150 00
Grattan Township Roads:—	
Donegal Road	195 13
McGrath Road	103 50
Opeongo Line	100 50
Curry Church Road	104 00
Griffith and Matawatchan Township Roads:—	
Griffith Road to Toohey's	195 00
Toohey's Mountain Road	52 50
Godin's Road	50 00
Berlanquit's Hill	101 50
McGregor's Corners	103 00

Name of Road.	Expenditure.
Hagarty, Richards and Burns Township Roads:—	
Wilno and Rockingham Road	100 75
Killaloe and Brudenell Road	224 00
Killaloe and Wilno Road	200 00
Polish Church Road	100 00
Hagarty and Sherwood Townline	100 00
Becker's to German Church	100 00
Harlowe and Cloyne Road	100 00
Harvey Township Roads:—	
Sandy Lake Road	200 00
Bobcaygeon Road	200 50
Deer Bay Road	50 00
Hastings Road South of Maynooth	300 00
Head, Clara and Maria Township Roads	150 00
Hinchinbrooke Township, Bog Road	100 25
Hugel Township Roads	102 35
Hungerford Township Roads:—	
Con. 7	151 47
Lodge Room Church Road	100 62
Con. 8	50 00
Huntingdon Township Roads	201 50
Kaladar Township Roads	400 00
L'Amable and Fort Stewart Road	201 55
Lanark, 7th Line, Lots 9 and 10	200 00
Lavant and Plevna, Storey's Bridge to Plevna	149 94
Lavant and Plevna, Storey's Bridge to Lavant	300 26
Lavant and Folger Road	200 00
Laxton, Digby and Longford Township Roads:—	
Cameron Road	50 00
North Quarter Line Road	50 00
Monck Road, Lot 11, Con. 4	100 50
Limerick Township Roads	200 00
Loughborough Township, Buck Lake Road	101 50
Loughborough Township, Portland Road	198 65
Lutterworth Township Roads:—	
Bobcaygeon Road from Steel Bridge	50 00
Miners Bay Road	100 00
Lyell Township Roads:—	
Madawaska to Cross Lake	200 00
South and North from Dunn's	199 99
Davidson's Lot running East	100 00
Madawaska and Hastings Road	400 00
Mayo Township Roads	201 50
Methuen Township Roads	100 00
Minden Township Roads	148 40
Monmouth Township Roads:—	
Hotspur to Torry Hill	49 99
Cons. 10 and 11, Lot 20	49 95
Lot 20, South to Monck Road	51 37
Montague Township Roads	301 59
Monteagle Township, Lots 20 and 21	151 30
Moxam's Settlement Road	149 53
Musclow Schoolhouse Road	150 00
North Algona Township Roads	150 00
North Elmsley Township Roads	297 50
Olden Township, McKnight Road	118 23
Oso Township, England Road	200 00
Palmerston Township, Lavant Road	175 00
Papineau Township Roads:—	
Lot 15, Con. 15	100 00
Mattawa Road Sideline	50 00
Chenier's Hill	49 62
Con. 11, Sideline	201 95
Lot 5, Con. 11	99 06
Con. 8, Lot 4	149 34
Lot 33, Con. 12	150 25
Lot 25, Con. 10	100 00
Lot 13, Con. 10	100 51

Name of Road.	Expenditure.
Pembroke Township Roads	500 00
Petawawa Township Roads	200 00
Peterson Road, Maynooth to Combermere	200 98
Portland Township Roads:—	
Alton Road	100 00
Bellrock and Enterprise Road	90 00
Radcliffe Township Roads:—	
Kirwin Hill	99 94
Combermere and Palmer Rapids	300 00
Raglan Township Roads:—	
Sixteenth Con. Line	100 00
Eighteenth Con. line	100 00
Hardwood Lake Road	100 00
Third Con. Line	99 70
Snake Creek Road	90 00
Madigan's Hill	102 00
Rama and Morrison Townline	206 53
Rama Township on Con. L	500 00
Rama Township North to Lot 21	300 00
Rama Township, Dalton and Washago Road	300 00
Raycroft White Lake Road	200 00
Richmond Township, West Boundary North of Kingsport	99 69
Ross Township Roads	303 26
Sebastopol Township Roads:—	
Jamieson Mine Road	105 50
Cross Road to Quadville	200 25
Sherborne Township Roads	100 00
Sherwood Township Roads:—	
Barry's Bay and Combermere Road	204 95
Wilno and Rockingham Road	100 75
Siberia Road	158 00
Wilno and Barry's Bay Road, North End	99 45
Wilno and Barry's Bay Road, South End	100 00
Snowdon Township Roads:—	
Dutch Line Road	50 00
Gelert Road	100 00
South Algona Township Roads:—	
Cormac Telegraph Road	205 37
Eganville and Killaloe Road	200 00
Springer Township Roads	204 75
Stafford Township Roads	300 94
Stanhope Township Roads:—	
Bobcaygeon Road from Taylor's	57 65
Maple Lake Road South Side	102 50
Tamworth and Arden Road	300 30
Tamworth Road running North	151 13
Tyendinaga Township Roads	202 26
Tudor and Cashel Township Roads	200 00
Vanacher and Matawatchan Road	200 00
Westmeath Township Roads	250 00
Westport and Sherbrooke Northern Road	199 75
Westport and Sherbrooke South Road	152 99
White Lake Road	312 25
Wicklow and McClure Township Roads	202 67
Widdifield Township Roads:—	
Sideroad 19 and 20	199 75
Sideroad 14 and 15, Con. 11	102 25
Sideroad Lot 9, Con. A	100 00
Con. B from Timiskaming Road	100 00
Sideroad Lots 16 and 17, Con 1	100 50
Sideroad Lot 6, Con. 4	74 99
Lots 6, 7 and 8, Con. A and B	81 20
Con. 1, Lot 6	80 85
Con. C, Lots 16 and 17	50 00
Cons. A and B, Sideroad, Lots 20 and 21	75 00
Lot 16, Con. D	75 00

Name of Road.	Expenditure.
Wilberforce Township Roads:—	
Eganville and Germanicus Road	109 05
Lake Dore Hill	200 00
Dore Bay Hill	201 97
District Line Road	202 80
Wylie Township Roads:—	
Moor Lake and Desjoachin	207 50

By-laws.

Admaston By-law No. 214	250 00
Bancroft By-law No. 126	100 00
Belmont and Methuen By-law No. 572	466 48
Brighton By-law No. 591	291 66
Bromley By-law No. 241	973 59
Caldwell By-law No. 228	600 00
Camden By-law No. 431	735 00
Carlow By-law No. 76	200 00
Cosby and Mason By-law No. 19	200 00
Douro By-law No. DCCCXXII	195 78
Dummer By-law No. 820	295 17
Dungannon By-law No. 86	300 00
Dysart By-law No. 567	1,199 80
Eldon By-law No. 447	499 76
Elzevir and Grimsthorpe By-law No. 13a	400 00
Faraday By-law No. 71	200 00
Front of Leeds and Lansdowne By-law No. 715	950 00
Hinchinbrooke By-law No. 8	940 00
Hungerford By-law No. 56	200 00
Huntingdon By-law No. 373	200 00
Kennebec By-law No. 6	650 00
Limerick By-law No. 4	200 00
Loughborough By-law No. 78a	400 00
Madoc By-law No. 19	400 00
Marmora and Lake By-law No. 501	100 00
Martland By-law No. 106	300 00
Mayo By-law No. 291	200 00
Monteagle and Herschel By-law No. 442	600 00
Murray By-law No. 816	600 00
North Crosby By-law No. 496	146 94
Olden By-law No. 39b	690 63
Oso By-law No. 109	400 00
Pittsburgh By-law No. 10	700 00
Portland By-law No. 579	514 05
Rawdon By-law No. 364	350 00
Rear of Leeds and Lansdowne By-law No. "C."	100 00
Rear of Leeds and Lansdowne By-law No. "D"	200 00
Richmond By-law No. 618	300 00
Ross By-law No. 331	750 00
Seymour By-law No. 885	500 00
Somerville By-law No. 674	300 00
Springer By-law No. 287	400 00
Stafford By-law No. 659	291 23
Storrington By-law No. 462	300 00
Tudor and Cashel By-law No. 12	600 00
Tyendinaga By-law No. 648	375 00
Westmeath By-law No. 148	750 00
Wollaston By-law No. 8	200 00

Maintenance and Repairs.

Eldorite Mine Road	199 82
Eganville and Cobden Road	400 00
Mud Lake Road	151 00
Molybdenite Mine Road	808 75
Hall's Mill and Clayton Road	150 00

Name of Road.	Expenditure.
Thibault Hill	785 17
Havelock and Cordova Road	293 45
Pembroke and Eganville Road	299 05
Wollaston Road	149 50

MISCELLANEOUS.

Alice Road, 1915	14 24
Escott Road, 1915	9 90
Wilno, Church and Barry's Bay Road, 1916	45 00
Golden Lake and Germanicus Road, 1916	50 00
Petawawa Station Road, 1916	100 00
Bastard and Burgess By-law No. "A," 1915	900 00
Casimir and Jennings By-law No. 67, 1915	400 00
Dysart By-law No. 560, 1915	800 00
Monteagle and Herschel By-law No. 434, 1915	650 00
South Crosby By-law No. 814, 1915	500 00
Somerville By-law No. 554, 1915	200 00
J. K. McConnell, inspection, 1915	169 50
Ferris Township, Groulx Account, 1915	49 00
Osceola Road, 1915	200 50
Grant to Dysart Municipality, 1915	835 00
Grant to Storrington Municipality, 1915	125 00
Grant to Brighton Municipality, 1915	600 00
Gravel for Roads and also Timber in North Hastings	195 80
J. K. McConnell, locating roads in McKim Township	18 00
Inspection, East Division	5,169 41

TIMISKAMING.

Armstrong, Con. 5, Lots 8, 9 and 10	380 79
Armstrong and Hilliard Townline, Cons. 1 to 3	894 82
Barber and Cane Boundary from Mountain Chute	240 25
Brethour and Casey Townline east of Bright's Creek	937 75
Bucke and Firstbrook Road	114 58
Bucke Township, Lots 3 and 4, Con. 1	615 24
Cane Township, Con. 2 from Lot 6 to Lot 2	699 20
Cane Township, Lots 8 and 9, Con. 5	599 50
Cane and Price Boundary east from Lot 12	394 00
Casey Township, Cons. 1 and 2, Lots 3 and 4	269 37
Casey and Brethour Townline from Lot 6 to Blanche River	1,161 75
Casey and Harley across Con. 5	598 49
Dymond Township, Cons. 4 and 5, North Road and West	9999 12
Dymond Township, Lake Shore Road on East Road	1,019 82
Dymond Township, Lots 2 and 3 across Con. 5	366 69
Firstbrook Township, Lots 8 and 9, Cons. 5 and 6	278 35
Harley Township, Lots 3 and 4, Cons. 2 and 3	499 97
Harley and Casey Townline	700 00
Harris Township, Main Road, Lots 2 and 3, Con. 5	726 66
Harris Township, Main Road, Lots 2 and 3, Con. 4 and part of 5	747 20
Henwood Township, Con. 4 East Boundary West to Line between Lots 6 and 7	799 94
Henwood Township, Con. 5, Lots 4 and 5	385 70
Henwood Township, Con. 4	198 78
Henwood Township, Lots 10 and 11 from Con. 3	998 95
Henwood Township, Cons. 3 and 4, across Lots 7, 8, 9 and 10	467 95
Henwood Township, Lots 2 and 3, Con. 4	440 55
Hilliard Township, Lots 10 and 11, Con. 5	362 50
Hilliard and Harley Townline from Lot 9 to Blanche River	1,390 55
Hilliard and Brethour Townline from Con. 2, North	163 70
Hudson Township, Lots 6 and 7, Con. 4	499 96
Hudson and Kerns Townline, Lots 3 and 4	511 64
Hudson Township, Con. 6, Lots 8 and 9, and Cons. 5 and 6, Lot 8	493 27
Hudson Township, Cons. 5 and 6, Lots 4 and 3, and north between Lots 2 and 3	450 00
Ingram Township, Lots 2 and 3, Cons. 1 and 2	675 09

Name of Road.	Expenditure.
Ingram and Hilliard Townline	1,497 58
Kerns Township, Cons. 4 and 5, Lots 7 and 8	549 73
Kerns Township, Cons. 5 and 6, Lots 9 and 10	602 03
Kerns Township, Cons. 4 and 5, Lot 2	230 00
Tudhope and Barber from Leeville North, Lots 2 and 3	321 70

BY-LAWS.

Bucke By-law No. 198	497 67
Casey By-law No. 39	1,538 50
Dymond By-law No. 141	1,427 53
Harris By-law No. 45	737 33
Hilliard By-law No. 74	290 09
Hudson By-law No. 53	500 00
Kerns By-law No. 135	1,087 00
Gowganda Road Repairs	21 00

TRUNK ROADS.

Gowganda Trunk Road	3,000 00

MISCELLANEOUS.

Casey By-law No. 29, 1915	1,173 27
W. E. Kerr, Inspection, 1915	132 00
Dr. Blakeman, damage to property, Gowganda Road	50 00
John Neil, balance, 1915	23 55
Armstrong Township, one Junior Grader	53 43
C. McCarthy, 9 months' storage	18 00
W. E. Kerr, rent of storehouse, 12 months	72 00
J. S. Leitch, Elk Lake Gowganda Road, Engineering services	332 30
Inspection Timiskaming District	611 95
Over-expenditures, 1915, on Colonization Roads	522 52

RECAPITULATION.

North Division	$115,166 44
West Division	32,057 71
East Division	70,943 65
Timiskaming District	34,848 79
Over-expenditures, Colonization Roads	522 52
Total	$253,539 11

Department of Public Works,
October 31st, 1916.

M. P. DOHERTY,
Accountant Colonization Roads.

STATEMENTS

OF THE

ACCOUNTANT

OF

PUBLIC WORKS

Department of Public Works, Ontario.
Toronto, February, 1917.

Hon. F. G. Macdiarmid,
Minister of Public Works and Highways.

Sir,—I have the honour to submit the following statements of Capital Expenditure on Provincial Public Buildings, Public Works, Colonization and Mining Roads, Good Roads (Highway Improvement), Aid to Railways, etc. Statement No. 1 gives the Capital Expenditure thereon for twelve months to the 31st of October, 1916; No. 2, the total Capital Expenditure from the 1st of July, 1867, to the 31st of October, 1916, and No. 3 shows in a condensed and classified form the various expenditures for thirty-seven years and six months, from the 1st of July, 1867, to the 31st of December, 1904, the expenditures for ten years and ten months from the 1st of January, 1905, to the 31st of October, 1915, the expenditures for the fiscal year 1915-16, and the grand total expenditure from the 1st July, 1867, to the 31st of October, 1916.

These statements, giving the amounts severally expended on Public Buildings, Public Works, Roads, Railways, etc., during the fiscal year ended on the 31st of October, 1916, and during two distinct periods since Confederation, as well as also the grand total expenditures thereon since that epoch, will, I trust, be deemed not only interesting, but, for purposes of reference, very serviceable to anyone desirous of securing information concerning the progress and status of the Province of Ontario, as indicated by the many valuable Provincial Public Buildings and Utilities, the capital expenditures on which are statistically compiled and contained therein.

I have the honour to be, Sir,

Your obedient servant,

M. C. O'Donnell,
Accountant Public Works.

STATEMENT No. 1.

Being a statement of expenditure on Capital Account for Public Buildings, Public Works, Drainage, Colonization and Mining Roads, Good Roads (Highways Improvement Act), Aid to Railways, etc., for the year ending October 31st, 1916. (See also Statement No. 2.)

Name of Work.	—	Amount.
	$ c.	$ c.
PUBLIC BUILDINGS:		
New Government House		162,442 69
Parliament Buildings: Automatic Fire Alarm	515 96	
" " Alterations to vaults, Lands, Forests and Mines	2,488 35	
" " Fittings for vaults, Lands, Forests and Mines	5,158 26	
" " Fuel Oil Burner	235 60	
" " Interior Alterations	5,045 49	
" " Alterations to provide additional accommodation and fire escapes	8,126 15	
		21,569 21
Osgoode Hall: General repairs	4,476 13	
" " Electric wiring and fixtures	422 19	
" " Painting interior and exterior	993 68	
" " Furnishings	1,978 03	
" " Fire protection	215 98	
		8,086 01
Hospital for Insane, Brockville		32,328 01
" " " Cobourg		3,496 62
" " " Hamilton, including Orchard House		60,183 66
" " " Kingston		21,049 25
" " " London		35,455 41
" " " Mimico		9,911 64
" " Feeble-minded, Orillia		154,812 74
" " Insane, Penetanguishene		16,415 90
" " " Toronto		2,675 75
" " " Whitby		431,585 04
" " Epileptics, Woodstock		7,229 45
Ontario Reformatory, Guelph		131,287 33
Mercer Reformatory, Toronto		4,806 08
Normal and Model Schools, Toronto		8,146 00
" " " " Ottawa		1,672 04
Normal School, Hamilton		1,187 03
" " London		1,199 23
" " North Bay		188 16
" " Peterborough		1,260 81
" " Stratford		2,172 25
English-French Training School, Sandwich		105 83
Ontario School for the Deaf, Belleville		3,892 14
" " " Blind, Brantford		3,843 21
" Agricultural College, Guelph		26,799 10
Horticultural Experimental Station, Jordan Harbor		1,003 70
Ontario Veterinary College, Toronto		3,325 37
Immigration Office, Front Street, Toronto		86 17
Algoma District:		
Court House, Gaol and Registry Office, Sault Ste. Marie		30,394 81
Kenora District:		
Court House, Gaol, Registry Office, etc., Kenora		949 93
Manitoulin District:		
Court House, Gaol, Registry Office, etc., Gore Bay	122 79	
Lock-up, Providence Bay	58 91	
		181 70

STATEMENT No. 1.—*Continued.*

Name of Work.	—	Amount.
	$ c.	$ c.
Muskoka District:		
Court House, Gaol, Registry Office, Bracebridge		422 57
Nipissing District:		
Court House, Gaol, and Registry Office, North Bay		293 30
Parry Sound District:		
Court House, Gaol and Registry Office, Parry Sound		1,048 12
Rainy River District:		
Court House, Gaol and Registry Office, Fort Frances		3,924 74
Sudbury District:		
Court House, Gaol and Registry Office, Sudbury	478 91	
Industrial Farm, Burwash	89,516 06	
		89,994 97
Temiskaming District:		
New Court House and Registry Office, Haileybury	1,304 40	
Lock-up, South Porcupine	850 35	
		2,154 75
Thunder Bay District:		
Court House, Gaol and Registry Office, etc., Port Arthur	272 53	
Registry Office, Fort William	18,189 92	
Lock-up at White River	90 00	
Industrial Farm, Fort William	36,181 57	
		54,734 02
Miscellaneous:		
Fish Hatchery, purchase of property		590 65
Boat Houses for Game and Fisheries		17 50
Compensation for injured workmen		979 28
Public Buildings		1,343,902 17
PUBLIC WORKS:		
Bar River Bridges, Laird		109 25
Beaver Creek River Road, Monck		203 50
Bells Settlement Bridge, Croft Township		43 01
Bergland Road Bridge		488 89
Black Bridge, Oakley		678 15
Black Creek Bridge, Gurd Townline		752 73
Boyne Bridge, Otter Lake Road		339 40
Buck River Bridge		52 00
Breakwater at Union		78 74
Cassimer and Jennings Bridges		27 11
Cardiff Township Bridges		5 20
Carlow Township Bridges		299 01
Coldwater Creek Bridge, Tarentorus		508 04
Combermere Bridge, Renewal		6,926 83
Cooper's Bridge, Big Carp		890 90
Cross Lake Bridge, Kennebec (conditional)		6,151 65
Day Mills Bridge		427 59
Dean's Creek Bridge, Korah		1,271 38
Deer Creek Bridge, 3rd Line, Ratter		499 49
Dennison Bridges, Trunk Road (3)		3,977 85
Eagle Lake Bridge		1,948 82
Easton Bridge, Sturgeon Creek, Dobie		615 39
Equipment, instruments, machinery, etc.		3,372 98
Faraday Township Bridges		1,001 21
Fish Creek Bridge, Hinchinbrooke		439 82
Fisher Creek Bridge, Stisted		135 12
Fagan's Bridge		695 50
Graham Creek Bridge, 5th Line, Chisholm		1,607 80
Grizell's Creek Bridge, Con. 6, Lutterworth		383 38
Gillies Township Bridges		635 43

STATEMENT No. 1.—*Continued.*

Name of Work.	—	Amount.
PUBLIC WORKS.—*Continued.*	$ c.	$ c.
Highland Creek Bridge, Griffith	.....	198 00
Hawk River Bridge, unpaid accounts, 1914-15	.....	124 72
Hills and Foy Bridges, Admaston	.....	200 00
Hobart Bridge, 9th Line, Medonte	.....	1,501 07
Hoc-Roc Bridge, Lake Shore Road, Muskoka	.....	728 60
Howell Bridge, grant to Clarendon	.....	149 13
Hurd's Bridge, McKellar	.....	1,903 27
Inholme Bridge	.....	587 12
Kent Bridge, Strong	.....	579 05
Kenora District Bridges	.....	1,555 30
Little East Bridge, Con. 1, Perry	.....	1,559 51
Little Kashee Bridge, Muskoka Road	.....	2,478 78
Long Lake Bridge, Stephenson	.....	4,229 57
Mackey Creek Bridge, Head	.....	452 79
Manitoulin District Bridges	.....	1,001 53
Mattawin Creek Bridges	.....	595 82
McArthur Mills Bridge, Mayo	.....	299 90
McLarty Bridge, Thessalon River	.....	564 48
Middleton Creek Bridges, grant, Verulam	.....	500 00
Money Bridge, Goulais Bay Road	.....	1,282 94
Monteagle-Wicklow Bridge	.....	575 83
Maintenance, locks, dams and bridges	.....	31,512 46
Norman Dam	.....	2,997 09
North Creek Bridge, Ryerson Road (conditional)	.....	1,014 69
North River Bridge, North Orillia	.....	1,978 86
Old Man Creek Bridge, Spence	.....	1,698 90
Pike Creek Bridge, Bastedo	.....	331 69
Pine River Bridges, Patullo-Nelles Townline	.....	2,722 79
Reay Bridge, unpaid accounts, 1914-15	.....	52 02
River Valley Bridge, Sturgeon River	.....	1,509 64
Rogerson Bridge, Little Carp	.....	1,089 40
Rubber boots, purchase of	.....	134 22
Stanley Bridge	.....	7,767 84
Seventh Concession Bridge, Lot 25, Fenelon, grant	.....	300 00
Shewfeldt Creek Bridge, Tarbutt, (conditional)	.....	1,492 83
Slate Bridge, Scobie-Pearson Townline	.....	376 51
Slate Bridge, Blake, Paipoonge Townline	.....	549 37
Sparks Creek Bridge, Bonfield	.....	2,254 78
Sturgeon Creek Bridge, 5th Line, Dobie	.....	520 91
Sucker Creek Bridge, Bala Road	.....	1,559 72
Surveys and inspections	.....	3,843 66
Temiskaming District Bridges	.....	3,352 35
Thornloe Road Bridge	.....	246 98
Tullocks Bridge, Gladstone	.....	592 15
Two Tree Bridge, Con. "G," St. Joseph	.....	398 21
Vankoughnet Bridge, Goulais River	.....	67 66
Van Louvin Bridge, Little Carp	.....	1,136 40
Wages and expenses, supervising foremen	.....	2,460 41
Walls Bridge, Big Carp	.....	791 90
Wassa Bridge, 12th Line, Chisholm	.....	428 86
Wassa Bridge, Chisholm	.....	896 05
Watson Bridge, Brudenell	.....	299 82
Public Works	.....	130,011 75
DRAINAGE WORKS:		
Algoma District Road Drainage	.....	1,372 68
Beauchamp Creek and Extension, County Grey, grant	.....	1,000 00
Big Creek Drain, Chatham, Dover (grant)	.....	5,000 00
Draining Rainy River Roads	.....	3,435 37
East Simcoe Drainage	.....	816 50
Fish Creek Improvement, Hinchinbrooke	.....	297 49
Long Swamp Drain, Chandos	.....	400 00

STATEMENT No. 1.—*Continued.*

Name of Work.	—	Amount.
	$ c.	$ c.
DRAINAGE WORKS.—*Continued.*		
Manitoulin District Road Drainage	.....	2,099 69
Muskoka District Road Drainage	.....	659 02
Nipissing District Road Drainage	.....	1,946 18
Parry Sound District Road Drainage	.....	758 97
Rama, Con. 4 Drain (conditional)	.....	283 50
Sturgeon Falls District Road Drainage	.....	1,870 71
Sudbury District Road Drainage	.....	2,373 91
Temiskaming District Road Drainage	.....	1,644 82
Drainage Works	.....	23,958 84
Colonization Roads	.....	253,539 11
Good Roads (Improvement of Highways) Statutory	.....	270,513 34
Aid to Railways (Subsidy Fund)	.....	139,112 54
Grand Total	.....	2,161,037 75
RECAPITULATION:		
Public Buildings	.....	1,343,902 17
Public Works	130,011 75	
" " Drainage	23,958 84	
		153,970 59
Colonization Roads	.....	253,539 11
Good Roads, Improvement of Highways	.....	270,513 34
Aid to Railways (Subsidy Fund)	.....	139,112 54
Grand Total		2,161,037 75

Department of Public Works, Ontario.
Toronto, February, 1917.

M. C. O'DONNELL,
Accountant Public Works.

STATEMENT No. 2.

Being a statement of expenditure on Capital Account for Public Buildings, Public Works, Colonization and Mining Roads, Aid to Railways, Good Roads (Public Highway Improvement), etc., as follows: (1) The total expenditure from the 1st of July, 1867, to the 31st of October, 1915; (2) the expenditure for the twelve months ending the 31st of October, 1916, and (3) the grand total of expenditure from the 1st of July, 1867 to the 31st of October, 1916.

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct. 1916.	Total Expenditure to 31st Oct., 1916.
PUBLIC BUILDINGS:			
	c.	$ c.	$ c.
Old Government House	183,860 86	.....	183,860 86
New Government House, including purchase price, etc., of lands on Bloor Street, $90,670.50, sold subsequently for $150,000.	1,011,425 98	162,442 69	1,173,868 67
Old Parliament and Departmental Buildings	85,285 98	.....	85,285 98
New Parliament and Departmental Buildings (original cost of construction)	1,282,679 04	.....	1,282,679 04
Parliament and Departmental Buildings, equipment, furnishings, library fittings, grounds, roads, plant house and alterations, etc., No. 4 Queen's Park (Library) included	255,688 05	21,053 25	276,741 30
Automatic Fire Alarm, East and Centre Buildings	5,453 59	515 96	5,969 55
No. 5 Queen's Park, purchase of house	12,515 44	.....	12,515 44
No. 5 Queen's Park, alterations and equipment	18,248 76	.....	18,248 76
Hydro underground service	985 18	.....	985 18
Hydro equipment	12,034 28	.....	12,034 28
Legislative Chamber, correcting acoustics	8,185 00	.....	8,185 00
Parliament Buildings, addition of New North Wing, furnishings, equipment, library, etc.	756,704 71	.....	756,704 71
Parliament Buildings, reconstruction and fireproofing of West Wing	659,008 96	.....	659,008 96
Osgoode Hall, Toronto	323,491 45	8,086 01	331,577 46
Osgoode Hall, Toronto, addition to Centre Building (North Wing and equipment)	143,981 30	.....	143,981 30
Hospital for Insane, Brockville	840,260 44	32,328 01	872,588 45
" " Cobourg	146,458 16	3,496 62	149,954 78
" " Hamilton including Orchard House (Special Warrant (39,676.67)	1,187,360 16	60,183 66	1,247,543 82
Hospital for Insane, Kingston	700,249 04	21,049 25	721,298 29
" " London	1,343,195 56	35,455 41	1,378,650 97
" " Mimico	806,461 66	9,911 64	816,373 30
" " Penetanguishene	196,243 59	16,415 90	212,659 49
" " Toronto	454,923 76	2,675 75	457,599 51
" " Whitby, add'nl bldgs., land, equipment, etc.	1,282,684 88	431,585 04	1,714,269 92
Hospital for Feeble Minded, Orillia	816,871 16	154,812 74	971,683 90
Hospital for Epileptics, Woodstock	272,661 47	7,229 45	279,890 92
Central Prison, Toronto	961,577 48	.....	961,577 48
New Provincial Prison and Reformatory, Guelph, including abattoir for Public Institutions, insurance, etc.	1,741,279 69	131,287 33	1,872,567 02
Mercer Reformatory for Females, Toronto	293,612 84	4,806 08	298,418 92

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year. ending 31st Oct., 1916.	Total Expenditure to 31st Oct., 1916.
PUBLIC BUILDINGS.—*Continued.*			
	$ c.	$ c.	$ c.
Normal and Model Schools, Toronto	310,241 66	8,146 00	318,387 66
" " " " Ottawa	272,862 59	1,672 04	274,534 63
Normal School, London	125,062 92	1,199 23	126,262 15
" " Hamilton	93,991 21	1,187 03	95,178 24
" " North Bay	105,079 44	188 16	105,267 60
" " Peterborough	98,399 31	1,260 81	99,660 12
" " Stratford	91,951 39	2,172 25	94,123 64
English-French Training School, Sandwich	12,518 11	105 83	12,623 94
Reformatory for Boys, Penetanguishene	191,512 00	.....	191,512 00
Ontario School for the Deaf, Belleville	623,742 78	3,892 14	627,634 92
Ontario School for the Blind, Brantford	482,547 24	3,843 21	486,390 45
Ontario Agricultural College, Guelph	1,014,960 83	26,799 10	1,041,759 93
Provincial Building, Canadian National Exhibition Association, Toronto (grant)	35,000 00	.....	35,000 00
Horticultural Experimental Station, Jordan Harbor	44,019 80	1,003 70	45,023 50
Dairy School, Kingston	23,613 56	.....	23,613 56
Dairy School, Strathroy	14,583 71	.....	14,583 71
Veterinary College, Toronto	252 23	.....	252 23
New Veterinary College, University Avenue, Toronto	344,562 51	3,325 37	347,887 88
School of Mining, Kingston	4,070 00	.....	4,070 00
Normal College, Hamilton (equipment Domestic Science Room)	854 25	.....	854 25
School of Practical Science (College of Technology)	59,100 26	.....	59,100 26
School of Practical Science (Queen's Park)	252,535 56	.....	252,535 56
School of Practical Science (New Chemistry and Milling and Mining Building)	448,213 15	.....	448,213 15
Children's Shelter, Toronto	8,864 95	.....	8,864 95
Immigration Office, Toronto	9,018 53	86 17	9,104 70
Fish and Game, Boat House and Hatchery Building, and purchase of land	8,079 90	608 15	8,688 05
Ontario Government Office Building, London, England	45,336 21	.....	45,336 21
Winter Fair Building, Guelph	25,101 25	.....	25,101 25
Hygienic Institution, London	74,297 41	.....	74,297 41
Agricultural Hall, Toronto	324 00	.....	324 00
Government Farm, Mimico	51,646 34	.....	51,646 34
Pioneer Farm, Algoma	5,178 43	.....	5,178 43
Brock's Monument, Queenston Heights	4,605 31	.....	4,605 31
Niagara River Fence	8,025 43	.....	8,025 43
Compensation to Workmen injured on Government Works	252 05	979 28	1,231 33
ALGOMA DISTRICT:			
Court House, Gaol and Registry Office, Sault Ste. Marie	35,101 14	397 31	35,498 45
New Court House and Gaol, Sault Ste. Marie	10,914 82	29,997 50	40,912 32
Registry Office, addition to, Sault Ste. Marie	11,658 02	.....	11,658 02
Lock-up, Bruce Mines	3,117 48	.....	3,117 48
" Blind River	2,642 87	.....	2,642 87
" Cutler	864 70	.....	864 70
" Echo Bay	500 00	.....	500 00
" Hilton	500 00	.....	500 00
" Thessalon	2,221 99	.....	2,221 99
" Wawa	1,330 16	.....	1,330 16
Industrial Farm, Sault Ste. Marie	105 60	.....	105 60

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st October, 1916.
PUBLIC BUILDINGS.—*Continued.*			
KENORA DISTRICT:			
	$ c.	$ c.	$ c.
Court House and Gaol, Gaoler's Residence, Registry Office, etc., Kenora	45,845 86	949 93	46,795 79
New Registry Office, Kenora	15,933 78	.....	15,933 78
New Court House, Kenora	59,238 52	.....	59,238 52
Land Titles Office, Kenora	575 00	.....	575 00
Sea Wall, Kenora	3,197 65	.....	3,197 65
Grounds and Walks, Kenora	1,148 76	.....	1,148 76
Lock-up at Dryden	1,521 00	.....	1,521 00
MUSKOKA DISTRICT:			
Court House, Gaol and Registry Office at Bracebridge	36,650 44	422 57	37,073 01
Lock-up and Court House at Huntsville	8,364 85	.....	8,364 85
Lock-up and Court Room at Baysville	300 00	.....	300 00
Immigration Sheds at Gravenhurst	355 00	.....	355 00
MANITOULIN DISTRICT:			
Grand Manitoulin Island, three lock-ups (Gore Bay, Little Current and Manitowaning) transferred from Algoma Dist.	22,287 60	122 79	22,410 39
Lock-up, Killarney	1,298 97	.....	1,298 97
Court House, Gaol, etc., Gore Bay	9,637 34	.....	9,637 34
Lock-up, Manitowaning	379 74	.....	379 74
" Providence Bay (grant)	500 00	58 91	558 91
" Little Current	58 95	.....	58 95
NIPISSING DISTRICT:			
Lock-up, Court House, Registry Office, and Gaoler's House, North Bay	54,281 32	293 30	54,574 62
Lock-up, Bonfield	694 67	.....	694 67
" Cache Bay	500 00	.....	500 00
" Markstay	600 00	.....	600 00
" Mattawa	14,949 19	.....	14,949 19
" Sturgeon Falls	2,266 28	.....	2,266 28
" Warren	600 00	.....	600 00
PARRY SOUND DISTRICT:			
Registry Office, Lock-up and Court Room, House for Gaoler, Land Titles Office, Parry Sound	49,330 62	1,048 12	50,378 74
Lock-up at Magnetawan	645 56	.....	645 56
Lock-up and Court Room, Burk's Falls	6,621 96	.....	6,621 96
Lock-up, French River	1,198 62	.....	1,198 62
" Dunchurch	609 00	.....	609 00
" Emsdale	300 00	.....	300 00
" Byng Inlet	1,232 35	.....	1,232 35
" South River	500 00	.....	500 00
" Powassan	1,250 00	.....	1,250 00
" Callender	500 00	.....	500 00
" Sundridge	500 00	.....	500 00
RAINY RIVER DISTRICT:			
Registry Office, Gaol and New Court House, Fort Frances	103,683 40	3,924 74	107,608 14

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st October, 1916.
PUBLIC BUILDINGS.—*Continued.*			
RAINY RIVER DISTRICT.—*Continued.*	$ c.	$ c.	$ c.
Lock-up, Mines Centre	1,205 48	.....	1,205 48
" Emo	1,888 94	.....	1,888 94
" Atikokan	1,571 31	.....	1,571 31
" Beaver Mills	1,840 71	.....	1,840 71
SUDBURY DISTRICT:			
Court House and Gaol and Registry Office, Sudbury	83,919 55	478 91	84,398 46
Lock-up, Sudbury	12,595 48	.....	12,595 48
" Chelmsford	1,015 78	.....	1,015 78
" Massey	1,702 74	.....	1,702 74
" Nairn	300 00	.....	300 00
" Webbwood	1,749 15	.....	1,749 15
" Chapleau	1,626 49	.....	1,626 49
Industrial Farm, Burwash	73,577 65	89,516 06	163,093 71
Industrial Farm, Burwash (compensation to settlers)	9,276 02	.....	9,276 02
THUNDER BAY DISTRICT:			
Registry Office, Lock-up, Court House, etc., Port Arthur	70,741 71	272 53	71,014 24
Registry Office, Fort William	12,769 81	18,189 92	30,959 73
Lock-up, Fort William	9,723 90	.....	9,723 90
" Silver Islet	2,304 79	.....	2,304 79
" Nepigon	1,279 23	.....	1,279 23
" Schreiber	700 00	.....	700 00
" Superior Junction (Sioux Lookout)	1,159 04	.....	1,159 04
" White River	499 77	90 00	589 77
Industrial Farm and Buildings, Fort William	104,967 07	.....	104,967 07
Industrial Farm, Fort William, purchase of live stock, vehicles and farm implements.	5,090 12	36,181 57	41,271 69
Industrial Farm, Fort William, medical attendance, etc., Asst. Superintendent	156 95	.....	156 95
TEMISKAMING DISTRICT:			
Lock-up, Cobalt	5,589 49	.....	5,589 49
" Cochrane	1,000 00	.....	1,000 00
" Charlton	500 00	.....	500 00
" Englehart	975 00	.....	975 00
" Gowganda	3,105 07	.....	3,105 07
" New Liskeard	657 00	.....	657 00
" North Porcupine (from Nipissing)	2,671 18	.....	2,671 18
" South Porcupine (from Sudbury)	138 80	.....	138 80
" South Porcupine	6,304 76	850 35	7,155 11
" Matheson	1,263 86	.....	1,263 86
Temporary Court House, Haileybury	5,906 33	.....	5,906 33
New Court House and Registry Office, Haileybury	87,459 59	1,304 40	88,763 99
COUNTY OF HALIBURTON:			
Registry Office at Minden	5,918 42	.....	5,918 42
Gaol and Court House at Minden (grant)	1,000 00	.....	1,000 00
Lock-up at Gooderham	200 00	.....	200 00
Public Buildings	21,734,657 19	1,343,902 17	23,078,559 36

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st October, 1916.
PUBLIC WORKS:			
Admaston Bridge, Bonnechere River	3,778 81	.....	3,778 81
Admaston, Ninth Concession Bridge	399 83	.....	399 83
Ansonia Bridge, Lefroy	4,848 82	.....	4,848 82
Antoine Creek Bridge, Tp. Mattewan	3,223 36	.....	3,223 36
Ardock Bridge, County of Frontenac	900 00	.....	900 00
Aubrey and Ignace Bridges	881 02	.....	881 02
Axe Creek, Housey's Outlet and Kahshee Bridges	1,221 57	.....	1,221 57
Balsam and Cameron Lakes, Locks	23,959 02	.....	23,959 02
Balsam River Works	16,585 11	.....	16,585 11
Bangor, Wicklow and McClure Bridges	1,082 07	.....	1,082 07
Barbette Creek Bridge, Clara	993 92	.....	993 92
Bar River Bridge, Laird and McDonald	394 21	109 25	503 46
Bar River Tp. McDonald (removing obstructions)	130 55	.....	130 55
Bass Creek Bridge, Tp. Limerick	1,200 00	.....	1,200 00
Bass Lake Dam, Tp. Galway, Peterborough.	1,000 00	.....	1,000 00
Baysville Bridge	2,947 50	.....	2,947 50
Bear Creek Dam and Slide	1,617 52	.....	1,617 52
Beauchamp Townline Bridge	598 17	.....	598 17
Beaudette River (dredging, etc.)	3,000 00	.....	3,000 00
Beaver Creek Bridge, Kenora District	784 68	.....	784 68
Beaver Creek Bridge, Monck Tp.	996 77	.....	996 77
Beeline Bridge, Alice Tp.	499 63	.....	499 63
Bell's Rapids Bridge, County of Renfrew	2,494 79	.....	2,494 79
Bell's Settlement Bridge, Croft Tp.	3,196 05	43 01	3,239 06
Bens River, Ryde, and Black Creek Bridges	2,132 24	.....	2,132 24
Berriedale Bridge, Tp. Armour	935 77	.....	935 77
Big East River and Black Creek Bridges, Chaffey	3,534 61	.....	3,534 61
Big East River Bridge	5,596 03	.....	5,596 03
Big Carp Bridge, Awengo (grant)	700 00	.....	700 00
Bigwood Bridges, Nipissing District	7,389 80	.....	7,389 80
Birch Creek Bridge, Sudbury Soo Trunk Road	8,157 86	.....	8,157 86
Birch Creek Bridge, Birch Lake Road	4,285 27	.....	4,285 27
Bissett's Creek Bridge, Nipissing District	699 57	.....	699 57
Black Creek Bridge, Himsworth Tp.	449 33	.....	449 33
Black Creek Bridge, Robertsville	149 05	.....	149 05
Black Creek Bridge, Dalton Tp.	5,028 49	.....	5,028 49
Black Donald Creek Bridge, Brougham	314 20	.....	314 20
Black Bay Road Bridge, Port Arthur	5,000 00	.....	5,000 00
Black Creek, removing obstructions, Tps. Monck and Watt	1,480 76	.....	1,480 76
Black Creek Bridge, Tp. Palmerston	250 00	.....	250 00
Black Duck and Indian River Bridges	869 48	.....	869 48
Black Bridge, Muskoka	1,500 00	.....	1,500 00
Black River Bridge, Matheson	3,938 68	.....	3,938 68
Black River Works (Lake Simcoe)	3,136 10	.....	3,136 10
Black River Bridge, Tp. Draper, Muskoka (to rebuild)	509 48	.....	509 48
Black Sturgeon Bridge	1,179 10	.....	1,179 10
Black Sturgeon Bridge, Mellick	939 05	.....	939 05
Blanche River Bridge, High Falls	2,882 33	.....	2,882 33
Blanche River Bridge, Marter Tp.	3,153 54	.....	3,153 54
Blind River Bridge	2,772 34	.....	2,772 34
Blind River Bridge, Soo Trunk Road	8,081 21	.....	8,081 21
Boda Creek Bridge, Shakespeare	389 79	.....	389 79
Boon Creek Bridge	2,276 72	.....	2,276 72

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st Oct., 1916.
PUBLIC WORKS.—*Continued.*			
Bonnechere Bridge, Algona (conditional)	2,756 58	.....	2,756 58
Bonnechere River Bridge, Bromley Tp.	2,566 38	.....	2,566 38
Bonnechere River Bridge, Horton Tp. (grant)	1,000 00	.....	1,000 00
Bonnechere River Works	338 50	.....	338 50
Boston Creek Bridge	1,332 95	.....	1,332 95
Bottle Lake Dam and Mississicua Creek Dam	4,068 72	.....	4,068 72
Boyne Bridges, Foley	2,160 98	.....	2,160 98
Breakwater at Union, South Essex	2,623 03	78 74	2,701 77
Brower Creek Bridge, Tp. Glackmeyer	240 00	.....	240 00
Bruce Mines Bridge	2,031 21	.....	2,031 21
Brule Creek Bridge	489 85	.....	489 85
Bracebridge Bridge	7,000 00	.....	7,000 00
Buck Lake Bridge	305 06	.....	305 06
Bunting Creek Bridge	586 13	.....	586 13
Burk's Falls Bridge, Magnetawan River	2,606 14	.....	2,606 14
Burnt River Bridge, Tp. Snowdon	2,017 11	.....	2,017 11
Burnt River Bridge, Tp. Somerville	4,930 61	.....	4,930 61
Burnt River Bridge, Buckhorn Road	3,281 98	.....	3,281 98
Burnt River Bridges, Vermilion River, Tp. Capreol	2,317 87	.....	2,317 87
Bushkong Lake Bridge, Paterson Road	3,386 92	.....	3,386 92
Bushkong Lake Bridge, Tp. Stanhope	3,030 91	.....	3,030 91
Beggsboro Bridge, McMurrich (conditional)	599 44	.....	599 44
Black Bridge, 4 and 5, Oakley	822 70	678 15	1,500 85
Boundary Creek Bridge, grant to Kennebec	199 38	.....	199 38
Buck River Bridge, Ryde	1,981 04	52 00	2,033 04
Buckshot Creek Bridge, grant to Clarendon	192 04	.....	192 04
Beaver Creek River Road, Monck	.....	203 50	203 50
Bergland Road Bridge	.....	488 89	488 89
Black Creek Bridge, Gurd Townline	.....	752 73	752 73
Boyne Bridge, Otter Lake Road	.....	339 40	339 40
Cache Creek Bridge, Springer Tp.	344 27	.....	344 27
Calabogie Bridge, Tp. Bagot	1,905 24	.....	1,905 24
Campement D'Ours Island Bridge	4,970 09	.....	4,970 09
Canard River Bridge	1,000 00	.....	1,000 00
Cardiff and Maxwell Bridges	3,723 24	.....	3,723 24
Cardiff-Monmouth Townline Bridge	597 53	.....	597 53
Cardwell and Baxter Bridges	2,108 64	.....	2,108 64
Carlow-Brethour Bridge, Blanche River	7,826 76	.....	7,826 76
Cashmere Dam, Middlesex	1,144 19	.....	1,144 19
Cassimer River, removing obstructions	205 56	.....	205 56
Chapleau Bridge	2,231 40	.....	2,231 40
Chippewa Creek Bridge, Widdifield	1,842 38	.....	1,842 38
Chemong Lake Bridge	3,500 00	.....	3,500 00
Christian's Creek Bridge, grant to Fenelon	200 00	.....	200 00
Clare River Bridge, Sheffield	2,544 46	.....	2,544 46
Clark's Bridge, grant to Kennebec	600 00	.....	600 00
Clear Creek Bridge, Orford Tp.	500 00	.....	500 00
Clearing and Log Houses on Free Land grants, Settlers' Homestead Fund	16,780 75	.....	16,780 75
Clyde River Bridge, grant to South Cannonto	499 00	.....	499 00
Commanda Lake Bridge	465 95	.....	465 95
Corbett Creek Bridge, Oliver	1,674 94	.....	1,674 94
Cobb's Lake Outlet	1,102 08	.....	1,102 08
Cosby Bridge, Nipissing District	493 85	.....	493 85
Couchiching Lake Works	427 82	.....	427 82
Creighton Vermilion Bridge	398 74	.....	398 74

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st Oct., 1916.
PUBLIC WORKS.—*Continued.*	$ c.	$ c.	$ c.
Crocodile Creek, Nipissing District	780 94		780 94
Cull's, Barry Bay and Calabogie Bridges	931 48		931 48
Cardiff Townline Bridges	550 88	5 20	556 08
Carlyon Bridge	3,426 76		3,426 76
Carrick Bridge, grant to Rama	1,000 00		1,000 00
Cassimer and Jennings Bridges	479 85	27 11	506 96
Cregos Creek Bridge, Monk Road	1,065 38		1,065 38
Crooked Rapids Bridge, Bonfield	2,636 73		2,636 73
Carlow Township Bridges		299 01	299 01
Coldwater Creek Bridge, Tarentorus		508 04	508 04
Combermere Bridge, Renewal		6,926 83	6,926 83
Coopers' Bridge, Big Carp		890 90	890 90
Cross Lake Bridge, Kennebec (conditional)		6,151 65	6,151 65
Dack-Sunday Creek Bridge	259 78		259 78
Dacre Bridge, Brougham Tp.	395 63		395 63
Damage by rising waters near Kenora	800 00		800 00
Dausey Bridge at Blind River, Algoma	4,048 85		4,048 85
Dawson Road Bridge	1,480 36		1,480 36
Dean Lake and Thompson Road Bridge, Algoma District	1,095 48		1,095 48
Dee Bank Bridge, Watt Tp., Muskoka District	2,696 92		2,696 92
Deep Bay Narrows, improvement	248 35		248 35
Deer Lake Works, dam and slide, Tp. Anstruther	1,420 17		1,420 17
Delta Creek improvements	99 24		99 24
Denbigh Bridge, Hyde's Creek	1,772 18		1,772 18
Desbarat's Bridge, Algoma	789 52		789 52
Des Joachim Rapids Bridge and approaches	9,937 72		9,937 72
Detola Branch Road Bridge	200 00		200 00
Docks at Southampton, Saugeen River	1,739 04		1,739 04
Docks on Rainy River	3,163 44		3,163 44
Docks (landing) at Beaudraul's, Wabigoon.	777 95		777 95
Dog Lake Dams, storage of water	73,358 50		73,358 50
Dickson Creek Bridge, Bucke Tp.	1,564 01		1,564 01
Dorset Bridge, Tp. of Dorset	7,621 72		7,621 72
Draper Bridge	500 00		500 00
Driftwood Bridges, Tp. Walker	2,195 89		2,195 89
Dryden Bridge	7,420 93		7,420 93
Dymond and Harris Townline Bridges	911 28		911 28
Dunsford Bridges, Verulam, grant	200 00		200 00
Day Mills Bridge, Algoma	1,169 54	427 59	1,597 13
Deer Creek Bridge, 4th Line, Ratter	496 28		496 28
Dungannon Bridges	699 71		699 71
Dean's Creek Bridge, Korah		1,271 38	1,271 38
Deer Creek Bridge, 3rd Line, Ratter		499 49	499 49
Dennison Bridges, Trunk Road (3)		3,977 85	3,977 85
Eagle Lake Dam, Anstruther Tp.	1,173 84		1,173 84
Eau Claire Bridge	5,747 73		5,747 73
Eaton Tp., Wabigoon Bridge	1,185 90		1,185 90
Echo River Bridge	1,332 11		1,332 11
Echo Bay Bridge	7,883 33		7,883 33
Eels Creek Bridge, Co. Peterborough	1,500 00		1,500 00
Emily Creek Bridge	2,889 29		2,889 29
Embankment along river, Dover Tp.	500 00		500 00
Englehart Bridge and Approaches	2,795 39		2,795 39
Equipment, Instruments, machinery, etc.	23,730 80	3,372 98	27,103 78
Espanola Bridge	17,980 23		17,980 23
Eagle Lake Bridge	684 44	1,948 82	2,633 26

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st October, 1916.
PUBLIC WORKS.—*Continued.*	$ c.	$ c.	$ c.
Easton Bridge, Sturgeon Creek, Dobie	.....	615 39	615 39
Faulkner Bridge, Monetteville, Lake Nipissing	589 47	.....	589 47
Fawcetts, Stephenson Townline, and Kahshee River Bridges	2,877 66	.....	2,877 66
Fifth Concession Bridge, Wabi, Dymond ..	1,499 17	.....	1,499 17
Filitrault Lake Bridge, boundary between Martland and Crosby	1,394 91	.....	1,394 91
Finlay's Bridge, Echo River, Kehoe	499 41	.....	499 41
Forsyth's Creek Bridge, Tp. Christie	519 45	.....	519 45
Fourth Concession Bridge, Hagar	1,058 51	.....	1,058 51
Frog Creek Bridge, McIrvine Tp.	497 93	.....	497 93
Frontenac County, to rebuild bridges destroyed by fires, Clyde River, Mud Lake and Con. 1, Clarendon	3,288 06	.....	3,288 06
Fisher Creek Bridge, Stisted	1,573 35	135 12	1,708 47
Fagan's Bridge	.....	695 50	695 50
Farraday Tp. Bridges	.....	1,001 21	1,001 21
Fish Creek Bridge, Hinchinbrook	.....	439 82	439 82
Gananoque River Improvement	366 23	.....	366 23
Gannon's Narrows Bridge, contribution ...	1,000 00	.....	1,000 00
Garden River Bridge, Trunk Road	12,775 74	.....	12,775 74
Gardener Lake Bridge, Hagerman Tp.	399 72	.....	399 72
Georgian Bay Works	7,149 97	.....	7,149 97
Gillies Tp. Bridges	472 03	635 43	1,107 46
Glenelg Bridges	1,000 00	.....	1,000 00
Gooderham and Kinmount Bridges	3,876 79	.....	3,876 79
Golden Lake Bridges	4,645 99	.....	4,645 99
Gold Rock Portage Bridges	1,001 93	.....	1,001 93
Gough's Bridge, Himsworth Tp.	2,637 96	.....	2,637 96
Goulais Bay Road Bridges	1,559 76	.....	1,559 76
Goulais River Bridges, Fenwick	7,448 51	.....	7,448 51
Grass River Bridge, Stanhope	281 55	.....	281 55
Grassy River Bridge, McCrosson Tp.	1,325 32	.....	1,325 32
Graces Creek Bridge	874 25	.....	874 25
Gratuity to Arthur Brown, injured at Tomstown Bridge	140 00	.....	140 00
Great Northern Road Bridge, Plummer	362 75	.....	362 75
Griffiths' Bridge	247 50	.....	247 50
Gull and Burnt River Works, dams, slides, bridges, etc.	100,716 60	.....	100,716 60
Gull Creek Bridge, grant to Sheffield	196 82	.....	196 82
Graham Creek Bridge, Con. 14, Chisholm ..	1,196 85	.....	1,196 85
Graham Creek Bridge, 5th Line, Chisholm..	.....	1,607 80	1,607 80
Grizell's Creek Bridge, Con. 6, Lutterworth.	.....	383 38	383 38
Haliburton Bridge, Tp. Dysart, grant	2,000 00	.....	2,000 00
Hawker's Creek Bridge, Verulam Tp., grant, 1910	200 00	.....	200 00
Head River Improvements, Tps. Laxton and Cardon	976 82	.....	976 82
Helferty Bridge, Raglan	380 00	.....	380 00
High Falls Bridge, Pigeon River	9,706 07	.....	9,706 07
High Falls Bridge, Tp. Macauley	1,730 37	.....	1,730 37
Hilliardton Bridge, over White River	5,460 89	.....	5,460 89
Himsworth Bridges	806 29	.....	806 29
Hoeffler Bridge	3,477 20	.....	3,477 20
Hoodstown Road Bridge, Chaffey Tp.	1,200 00	.....	1,200 00
Hoodstown Road Bridge, over Big East River	800 00	.....	800 00

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st October, 1916.
PUBLIC WORKS.—*Continued.*	$ c.	$ c.	$ c.
Hog Creek and North River Bridges	3,487 66	.....	3,487 66
Houles and Black Creek Bridges, Salter	3,621 63	.....	3,621 63
Housey's Rapids Bridge	3,565 03	.....	3,565 03
Hudson Creek Bridge, Tp. Kerns	1,792 94	.....	1,792 94
Hymers Bridge, Whitefish River	3,000 05	.....	3,000 05
Hawk River Bridge, Stanhope	217 82	124 72	342 54
Hurd's Bridge, McKellar	1,142 01	1,903 27	3,045 28
Highland Creek Bridge, Griffith	.....	198 00	198 00
Hills and Foy Bridges, Admaston	.....	200 00	200 00
Hobart Bridge, 9th Line, Medonte	.....	1,501 07	1,501 07
Hoc-Roc Bridge, Lake Shore Road, Muskoka	.....	728 60	728 60
Howell Bridge, Clarendon	.....	149 13	149 13
Indian Point Bridge, Manitoulin Island	6,876 49	.....	6,876 49
Indian River Works (deepening) Tps. Sarawak and Keppell	1,850 82	.....	1,850 82
Ingoldsby Bridge	299 94	.....	299 94
Inkerman Dam, Co. Dundas (removal of)	1,000 00	.....	1,000 00
Inholme Bridge, Seguin River	1,797 81	587 12	2,384 93
Jean Baptiste Bridge	98 31	.....	98 31
Jean Baptiste Bridge, 3rd Con. Armstrong	2,595 08	.....	2,595 08
Jean Baptiste Bridge, 4th Con., Armstrong	2,850 00	.....	2,850 00
Joseph River Bridge, Medora	1,756 07	.....	1,756 07
Judge Bridge, White River, Tp. Casey	9,961 81	.....	9,961 81
Kabuska Creek Bridge, Bonfield	4,980 20	.....	4,980 20
Kashee and Maxwell Bridges	269 00	.....	269 00
Kaministikwia River Works	22,865 02	.....	22,865 02
Kaministikwia Bridge, Paipoonge	37,553 97	.....	37,553 97
Katrine Bridge, Armour Tp.	1,257 23	.....	1,257 23
Kearney Bridge	6,798 82	.....	6,798 82
Kerr's Bridge, Co. Victoria	2,531 83	.....	2,531 83
Kinmount Bridge	1,500 00	.....	1,500 00
Kushog Lake Dam	300 00	.....	300 00
Kashee, Morrison and Doe Lake Road Bridges	3,165 50	.....	3,165 50
Kent Bridge, Strong Co. (conditional)	784 65	579 05	1,363 70
Kenora District Bridges	1,444 24	1,555 30	2,999 54
Lake of the Woods outlet (Kenora) to construct steel bridge	26,455 82	.....	26,455 82
L'Amable Bridge, Dungannon Tp.	1,271 43	.....	1,271 43
La Blanche River Bridge and approaches	5,817 72	.....	5,817 72
La Blanche River Bridge	2,929 87	.....	2,929 87
La Blanche Bridge, Tomstown	6,326 68	.....	6,326 68
La Blanche Bridge, townline, Marter Tp. (Special Warrant)	5,754 55	.....	5,754 55
La Grassi Bridge, grant	1,500 00	.....	1,500 00
Lake of Bays, dredging mouth of river outlet	581 82	.....	581 82
Lake Nosbonsing Bridge, Nipissing District.	3,497 68	.....	3,497 68
Lake Scugog Works, dredging at Port Perry	977 53	.....	977 53
Lake Scugog Flats Road	1,500 00	.....	1,500 00
Lake St. John and Sucker Creek, improving outlet	1,795 56	.....	1,795 56
Laird Township Bridges	1,693 22	.....	1,693 22
Lanark County, allowance for washout	1,225 00	.....	1,225 00
Landing Pier at Port Elgin	2,750 00	.....	2,750 00
Landing Pier at Southampton	2,022 63	.....	2,022 63
Larder Lake Road Bridges	1,219 81	.....	1,219 81
Le Vallee River Bridge, Woodyatt	2,374 62	.....	2,374 62

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st Oct., 1916.
PUBLIC WORKS.—*Continued.*	$ c.	$ c.	$ c.
La Vase and Boon Creek improvements	804 22	.....	804 22
Laurence Bridge, Gould Road	500 00	.....	500 00
Leeburn Bridge, Aberdeen	6,251 52	.....	6,251 52
Lee Valley Bridge, La Cloche Creek, Algoma District	3,036 40	.....	3,036 40
Little Rapids Bridge, Little Thessalon	3,261 08	.....	3,261 08
Little Serpent Bridge, Victoria	390 13	.....	390 13
Lockington Bridge, Lash	2,182 57	.....	2,182 57
Little East Bridge, Perry	.....	1,559 51	1,559 51
Little Kashee Bridge, Muskoka Road	.....	2,478 78	2,478 78
Long Lake Bridge, Stephenson	.....	4,229 57	4,229 57
Madawaska Village Bridge	1,319 00	.....	1,319 00
Madawaska River Bridge, near Arnprior	3,000 00	.....	3,000 00
Madawaska River Swing Bridge at Combermere, bridge at Burnston and bridges, Tp. Raglan	12,171 43	.....	12,171 43
Madawaska River Bridge, Airy Tp.	3,498 38	.....	3,498 38
Madawaska River Bridge, Murcheson Tp.	2,981 13	.....	2,981 13
Magnetawan Works, locks, swing bridge, dam and river improvements; dam and slide, Deer Lake; swing bridge, Tp. Ryerson; dredging Burk's Falls and removing obstructions, Ahmic Lake	76,778 26	.....	76,778 26
Magnetawan River Bridge, Perry Tp.	3,497 47	.....	3,497 47
Magnetawan River Bridge, Burk's Falls	16,002 30	.....	16,002 30
Magpie River Bridge	489 28	.....	489 28
Maintenance and Repairs, locks, dams, slides, bridges, etc. (exclusive of salaries)	460,131 76	31,512 46	491,644 22
Manitou Lake Works, dam at outlet, etc., Rainy River District	2,794 14	.....	2,794 14
Manitoulin Bridges	2,358 98	1,001 53	3,360 51
Manitowaba Bridge, McKellar Tp.	798 51	.....	798 51
Maple Island Bridge, Magnetawan River, Tp. McKenzie	993 32	.....	993 32
Marys and Fairy Lake Lock Works and bridge over Muskoka River at Huntsville.	80,438 37	.....	80,438 37
Marys and Fairy Lake Lock Works, to renew high bridge above lock over Muskoka River and renew cribbing above and below locks	8,389 39	.....	8,389 39
Martland Township Bridge	1,192 90	.....	1,192 90
Maskinonge Creek, Tp. Cassimer, removing obstructions	499 92	.....	499 92
Matawatchin Bridge, Renfrew County	8,485 67	.....	8,485 67
Mattawa River Bridge and Works	22,094 02	.....	22,094 02
Mill Creek improvements, Co. of Prescott	1,000 00	.....	1,000 00
Minden Bridge	4,740 68	.....	4,740 68
Minnitake Bridge	552 34	.....	552 34
Mississauga Bridge, Thompson Tp. (A. Baker, compensation for cow)	75 00	.....	75 00
Mississauga River Bridge, Thompson Tp.	24,593 87	.....	24,593 87
Mississauga River, re-flooring iron bridge	462 60	.....	462 60
Mississicua Lake Dam	4,989 84	.....	4,989 84
Mississicua River Bridge	4,355 94	.....	4,355 94
Mississippi River, McKenzie and Egan Bridges	2,125 26	.....	2,125 26
Mississippi River improvements (removing obstructions)	7,343 08	.....	7,343 08

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st Oct., 1916.
PUBLIC WORKS.—*Continued.*	$ c.	$ c.	$ c.
Mississippi River, Monroe's Rapids (removing obstructions)	900 00	.....	900 00
Moira River Improvements, Tp. Thurlaw	2,135 32	.....	2,135 32
Monck Road Bridge, etc., Cardiff	774 03	.....	774 03
Montreal River Bridge, Elk Lake	7,845 19	.....	7,845 19
Moose River Works, Co. Stormont	1,000 00	.....	1,000 00
Morley Township Bridge	742 28	.....	742 28
Mountain Lake Bridge, Minden	2,140 02	.....	2,140 02
Mud Creek Bridge, Tp. Herschell	1,800 00	.....	1,800 00
Mud Creek Bridge, Portland	1,000 00	.....	1,000 00
Mud Lake Works, Tp. Dalton	1,502 32	.....	1,502 32
Mumford's Bridge, Distress River, Tp. Chapman	2,202 01	.....	2,202 01
Muskoka Lake Works	21,915 30	.....	21,915 30
Muskoka Lakes, lock, bridges and dredging at Port Carling	64,683 45	.....	64,683 45
Muskoka Lakes, cut and bridge at Port Sandfield	20,336 05	.....	20,336 05
Muskoka, South Channel Bridge and dam at Bala	7,607 70	.....	7,607 70
Muskoka Lake, Muskosh Falls, dams and bridges at Bala	23,567 03	.....	23,567 03
Muskoka, Joseph River Works (less construction)	486 87	.....	486 87
Muskoka, Kemp's Channel, improvements	4,238 69	.....	4,238 69
Muskoka, piers and boom, Jeannette's Channel	1,660 75	.....	1,660 75
Muskoka River Works	42,670 53	.....	42,670 53
Muskoka River Bridge at South Falls	1,000 00	.....	1,000 00
Muskoka River Bridge at Port Sydney	1,000 00	.....	1,000 00
Muskoka River, Port Sydney Dam	7,324 88	.....	7,324 88
Muskoka Road Bridge, Koshie Creek	2,775 28	.....	2,775 28
Muskrat River Improvements	1,861 98	.....	1,861 98
Myer's Cave Bridge, Barrie Tp.	931 38	.....	931 38
McCarthy Creek Bridges, Tp. Gibbons	300 00	.....	300 00
McCreight's Bridge, Kirkwood Tp.	5,639 82	.....	5,639 82
McKelvery Creek Bridge, Crozier	1,837 67	.....	1,837 67
McKellar Village Bridge, Parry Sound District	942 28	.....	942 28
McKenzie Creek Improvements	209 35	.....	209 35
Mather-Kingsford Townline Bridges	485 73	.....	485 73
McGuire's Bridge, Con. 3, Plummer	591 22	.....	591 22
McKenzie Bridge, Oliver	1,280 28	.....	1,280 28
McLaren Creek Bridge, grant to Fenelon	200 00	.....	200 00
McLarty Bridge, Thessalon River	2,848 96	564 48	3,413 44
Mississippi Bridge, grant to Clarendon	199 08	.....	199 08
Moon Chute, improvements	143 58	.....	143 58
Mackey Creek Bridge, Head	.....	452 79	452 79
Mattawin Creek Bridge	.....	595 82	595 82
McArthur-Mills Bridge, Mayo	.....	299 90	299 90
Middleton Creek Bridges, grant to Verulam	.....	500 00	500 00
Money Bridge, Goulais Bay Road	.....	1,282 94	1,282 94
Monteagle-Wicklow Bridge	.....	575 83	575 83
Nation River Works	13,877 23	.....	13,877 23
Nation River Dredge (contribution)	4,000 00	.....	4,000 00
Nation River Bridge, 9th and 10th Cons., Cambridge Tp. (grant)	1,000 00	.....	1,000 00
Nation River Bridge, Casselman and Cambridge Tps. (grants)	2,000 00	.....	2,000 00

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July 1867, to 31st Oct. 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st Oct., 1916.
PUBLIC WORKS.—*Continued.*	$ c.	$ c.	$ c.
Neighick Lake, dredging at entrance	898 15	.....	898 15
Neebing River Bridge, Neebing Tp.	1,800 00	.....	1,800 00
New Liskeard Bridge, Wabis River	4,000 00	.....	4,000 00
Nipissing Lake Works	9,182 17	.....	9,182 17
Nogies Creek Works	2,144 57	.....	2,144 57
Norland Bridge, Cameron Road	1,354 70	.....	1,354 70
Northwest Arm Bridge	999 68	.....	999 68
North Branch Bridge, Longford	753 35	.....	753 35
North and Black Rivers, removing obstructions	4,535 13	.....	4,535 13
North Road Bridge, Tp. Dymond	1,877 24	.....	1,877 24
North River Bridge, Matchedash	5,526 65	.....	5,526 65
North River, to pay for stock injured by blasting	135 00	.....	135 00
Nottawasaga River Works	9,270 83	.....	9,270 83
Nuggett Creek Bridge, Kenora District	963 29	.....	963 29
Nolalu Bridge, Whitefish River	491 66	.....	491 66
Norman Dam	.....	2,997 09	2,997 09
North Creek Bridge, Ryerson Road	.....	1,014 69	1,014 69
North River Bridge, North Orillia	.....	1,978 86	1,978 86
Obstacles removed from navigable streams.	513 02	.....	513 02
Oakley Bridge, Muskoka	4,765 03	.....	4,765 03
O'Connor Tp. Bridges	1,095 29	.....	1,095 29
Omo Creek Bridge, Pembroke and Mattawa Road	2,979 50	.....	2,979 50
Onaping River Bridge	2,710 09	.....	2,710 09
Opickinimika River Dams	1,995 33	.....	1,995 33
Orillia Tp. Bridge	2,994 15	.....	2,994 15
Otonabee River Works	9,162 91	.....	9,162 91
Otonabee River Bridge	2,500 00	.....	2,500 00
Otter Creek Bridge at Copp's Falls	426 32	.....	426 32
Otter Creek Bridge, Casey-Brethour Townline	3,021 75	.....	3,021 75
Overhead Bridges, Soo Branch C.P.R.	11,070 17	.....	11,070 17
Oxdrift Bridge, Kenora District	656 90	.....	656 90
Oxtongue Bridge, Muskoka District	1,058 26	.....	1,058 26
Old Man Creek Bridge, Spence	.....	1,698 90	1,698 90
Palmer's Rapids Bridge, Renfrew	4,629 11	.....	4,629 11
Papineau Bridges, Boon Creek	3,085 88	.....	3,085 88
Payne River Bridge, Tp. Finch	2,500 00	.....	2,500 00
Payne River Works	4,000 00	.....	4,000 00
Pautois Creek Bridge, Calvin Tp.	2,373 82	.....	2,373 82
Pearson Tp. Bridges	792 33	.....	792 33
Peninsula Canal Bridge, Fairy Lake	8,471 20	.....	8,471 20
Peninsula Creek, improvements, bridges, etc.	37,495 16	.....	37,495 16
Petawawa River Bridge	3,879 25	.....	3,879 25
Peterson, Beaumaris and Cardwell Bridges.	4,311 57	.....	4,311 57
Pickerel River, improvement, Parry Sound District	4,114 60	.....	4,114 60
Pickerel River Bridge, Wilson Tp.	1,846 46	.....	1,846 46
Pigeon River Works, Co. Victoria	4,999 62	.....	4,999 62
Pinewood Bridge, Rainy River District, reflooring	375 00	.....	375 00
Pine River Bridge, Dilkes Tp.	1,522 65	.....	1,522 65
Pine River Bridge, Rainy River District	3,241 30	.....	3,241 30
Portage Bay Bridge, Keewatin	5,009 50	.....	5,009 50
Portage du Fort Bridge, Ottawa River	10,747 99	.....	10,747 99
Port Severn, Axe Lake and Cooper Bridges.	1,427 41	.....	1,427 41
Poverty Lake Bridge, Monmouth	406 11	.....	406 11

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st Oct., 1916.
PUBLIC WORKS—*Continued.*	$ c.	$ c.	$ c.
Powassan Bridge	300 00	.....	300 00
Pike Creek Bridge, Field	397 79	.....	397 79
Pine River Bridge, Morley Townline	3,405 21	.....	3,405 21
Pike Creek Bridge, Bastedo	.....	331 69	331 69
Pine River Bridges, Patullo-Nelles Townline	.....	2,722 79	2,722 79
Radcliffe Bridge	399 53	.....	399 53
Rainy River Road Bridge	4,429 84	.....	4,429 84
Rainy River Bridge	1,996 77	.....	1,996 77
Rates Bridge, Thessalon River	6,253 46	.....	6,253 46
River Valley Bridge, Sturgeon River	4,394 53	1,509 64	5,904 17
Roads, Tp. Ryerson	7,295 06	.....	7,295 06
Root River Bridge, Tarentorus Tp., 4th and 6th Cons.	5,483 83	.....	5,483 83
Root River Bridge, Soo Trunk Road	8,217 90	.....	8,217 90
Rose and Plummer Tps., Bridges	497 50	.....	497 50
Rossport Bridge, Thunder Bay District	881 75	.....	881 75
Round Lake Bridge, Hagarty	500 00	.....	500 00
Round Lake Road Bridges	2,301 90	.....	2,301 90
Rubber Boots, purchase of	371 54	134 22	505 76
Running Creek, dredging	1,500 00	.....	1,500 00
Rydal Bank Bridge	10,141 70	.....	10,141 70
Ryerson Townline Bridge, Sprucedale Road.	963 30	.....	963 30
Reay Bridge, Muskoka	641 81	52 02	693 83
Rosseau Falls Bridge	1,768 51	.....	1,768 51
Rogerson Bridge, Little Carp	.....	1,089 40	1,089 40
Salter and Victoria Bridges	499 38	.....	499 38
Sampson's and Spark's Creek Bridges, Bonfield	3,928 84	.....	3,928 84
Sand Lake Road Bridge, Magnetawan River	3,818 81	.....	3,818 81
Sakoose Bridges	947 68	.....	947 68
Sable River Bridge, Massey	12,708 20	.....	12,708 20
Saugeen River Bridge, Bentinck Tp.	900 00	.....	900 00
Scugog River Works (including Lindsay lock and swing bridge)	97,897 38	.....	97,897 38
Seguin River Bridge, Christie	5,709 89	.....	5,709 89
Severn River Bridge, Tp. Morrison	3,350 00	.....	3,350 00
Severn River Bridge, East Branch, Rama Tp.	1,990 00	.....	1,990 00
Shadow River Bridge, Tp. Humphrey	490 90	.....	490 90
Shallow Lake and Wabigoon Bridges	3,217 12	.....	3,217 12
Sherbineau Bridge, Hungerford	500 00	.....	500 00
Shoal Lake and Lake of the Woods, improvement Ash Rapids	5,998 25	.....	5,998 25
Six Mile Bridge, Shuniah	2,850 96	.....	2,850 96
Slate River Bridge, Kaministiquia River	580 14	.....	580 14
Sleeman's Bridge and approaches	1,044 80	.....	1,044 80
Snake River, improvements	140 65	.....	140 65
South River Bridges, Nipissing Tp.	5,890 80	.....	5,890 80
South River and Eagle Lake Bridges, Tp. Machar	1,295 87	.....	1,295 87
South River Bridge, Himsworth Tp.	1,937 30	.....	1,937 30
Spanish River Bridge, Massey	28,723 08	.....	28,723 08
Spanish River Bridge and approaches, Webbwood	18,364 73	.....	18,364 73
Spanish River Bridge, grant to Nairn Tp.	1,000 00	.....	1,000 00
Spanish River Bridge, Nairn Tp.	14,302 78	.....	14,302 78
Squaw River Works	1,688 16	.....	1,688 16
Squaw River Works, dam at Harvey	581 56	.....	581 56
Stanley Bridge, Thunder Bay District	8,142 89	7,767 84	15,910 73

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure, 1st July, 1867, to 31st Oct., 1915.	Expenditure, Fiscal Year ending 31st Oct., 1916.	Total Expenditure, to 31st Oct., 1916.
PUBLIC WORKS.—*Continued.*	$ c.	$ c.	$ c.
Star Lake Works	412 22	.....	412 22
Steidtler Creek Bridge, Parry Sound District	954 47	.....	954 47
Stephenson Float Bridge	808 15	.....	808 15
Still River Bridge, Byng Inlet	918 60	.....	918 60
Stisted, Sharpe's Creek and Hoc-Roc Bridges	2,537 28	.....	2,537 28
Stoney Creek Works, Ops Tp.	4,828 25	.....	4,828 25
Stoney Creek Bridge, Ryerson	831 68	.....	831 68
St. Joseph Tp. Bridge, Algoma District	1,288 98	.....	1,288 98
Sturgeon River Bridge, Tp. Field	3,616 08	.....	3,616 08
Sturgeon River Bridge, Tp. Gibbons	2,610 35	.....	2,610 35
Sturgeon Falls Bridge	18,841 51	.....	18,841 51
Sturgeon Bridge, Mather and Dobie Townline	358 33	.....	358 33
Suddaby's Bridge, Johnson	1,876 50	.....	1,876 50
Sunday Creek Bridge	603 00	.....	603 00
Sunday Creek Bridge, Dack	321 11	.....	321 11
Sunday Creek Bridge, Robilliard	357 37	.....	357 37
Surveys and Inspections, etc.	74,291 19	3,843 66	78,134 85
Swamp Creek Bridge, grant to Clarendon	188 70	.....	188 70
Swanson's Creek Bridge, Van Horne	962 00	.....	962 00
Sydenham River Works	2,156 26	.....	2,156 26
Sylvester Bridge Diversion, Kirkpatrick	724 71	.....	724 71
Scott River Bridge, grant to Kaladar	296 26	.....	296 26
Sherwood Station Bridge	3,382 82	.....	3,382 82
Strange Tp. Bridges	681 52	.....	681 52
Sturgeon Creek Bridge, Shenston	610 90	.....	610 90
Seventh Con. Bridge, grant to Fenelon	.....	300 00	300 00
Shewfeldt Creek Bridge, Tarbutt (conditional)	.....	1,492 83	1,492 83
Slate Bridge, Scobie-Pearson Townline	.....	376 51	376 51
Slate Bridge, Blake-Paipoonge Townline	.....	549 37	549 37
Sparks Creek Bridge, Bonfield	.....	2,254 78	2,254 78
Sturgeon Creek Bridge, 5th line, Dobie	....	520 91	520 91
Sucker Creek Bridge, Bala Road	.....	1,559 72	1,559 72
Talbot River Works	605 95	.....	605 95
Thessalon and Larchwood Bridges	7,769 69	.....	7,769 69
Thessalon Road (horse killed)	225 00	.....	225 00
Tiers Bridge, Hawker's Creek	200 00	.....	200 00
Toll Road, City of St. Thomas	3,000 00	.....	3,000 00
Toll Road, Hope Tp., purchase of	2,300 00	.....	2,300 00
Toll Road, London and Port Stanley, Elgin County, purchase of	3,000 00	.....	3,000 00
Toll Road, Tp. London, towards purchase of	3,666 00	.....	3,666 00
Tomstown Bridge, repairs	400 00	.....	400 00
Tory Hill Bridge	499 35	.....	499 35
Trenough Bridge, Rama	1,000 00	.....	1,000 00
Trent River Bridge and Works	2,000 00	.....	2,000 00
Tunnel Bridge, Wells Tp.	5,341 54	.....	5,341 54
Two Tree Bridge, St. Joseph's Island	1,812 95	.....	1,812 95
Two Tree Bridge, Con. "F," St. Joseph	500 00	.....	500 00
Temiskaming District Bridges	3,901 89	3,352 35	7,254 24
Temiskaming Railway Survey	24,823 58	.....	24,823 58
Thornloe Bridge, Wright's Creek	583 78	246 98	830 76
Tullock's Bridge, Gladstone	.....	592 15	592 15
Two Tree Bridge, Con. "G," St. Joseph	.....	398 21	398 21
Union Creek, improvements	1,050 63	.....	1,050 63
Veuve River Bridge, Tp. Dunnet	918 70	.....	918 70
Veuve River Bridge, Tp. Kirkpatrick	541 06	.....	541 06

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure, 1st July, 1867, to 31st Oct. 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure, to 31st Oct., 1916.
PUBLIC WORKS.—*Continued.*	$ c.	$ c.	$ c.
Veuve River Bridge, Hagar Tp.	997 95	.....	997 95
Veuve River Bridge, Markstay	3,229 82	.....	3,229 82
Veuve River Bridge, Tp. Verner	5,719 38	.....	5,719 38
Verner Culvert	1,163 11	.....	1,163 11
Vermilion River Bridge, Tp. Hanmer	662 75	.....	662 75
Vermilion River Bridge, Whitefish	18,840 63	.....	18,840 63
Vermilion River Bridge, Capreol	821 28	.....	821 28
VanKoughnet Bridge, Goulais River	5,886 23	67 66	5,953 89
Van Louvin Bridge, Little Carp	.....	1,136 40	1,136 40
Wabigoon Bridge	2,892 79	.....	2,892 79
Wabigoon Tp. Bridges	500 00	.....	500 00
Wabis River Bridges	2,773 33	.....	2,773 33
Wabis Creek, to construct bridge over	1,760 08	.....	1,760 08
Wabis River Works, Tps. Dymond, Harris and Kerns	1,340 51	.....	1,340 51
Wages and Expenses, supervising foremen	8,285 33	2,460 41	10,745 74
Wahnapitae Log Canal	3,334 54	.....	3,334 54
Wahnapitae River Bridge and approaches	4,642 49	.....	4,642 49
Walker River Bridge, Desbarats	1,470 86	.....	1,470 86
Warren Bridge, Veuve River	2,823 58	.....	2,823 58
Wasdale Bridge, Ontario and Simcoe	1,000 00	.....	1,000 00
Washago Wharf	489 22	.....	489 22
Washago and Gravenhurst Road	32,792 12	.....	32,792 12
Watt, Ryde and Macauley Bridges	4,094 98	.....	4,094 98
Waters, Second Con. Bridge	1,736 80	.....	1,736 80
Wawa Road Bridge	1,198 39	.....	1,198 39
West Arm Bridge, Lake Nipissing	11,260 08	.....	11,260 08
West's Bridge, Thessalon River, Plummer Tp.	5,345 32	.....	5,345 32
West Channel Bridge floor, Kenora	962 84	.....	962 84
White Bridge, Mayo	291 73	.....	291 73
Whitefish Bridge, removing obstructions	249 15	.....	249 15
White River Bridge, Pacaud boundary	3,423 97	.....	3,423 97
White River Bridge and approaches, Marter Tp.	3,185 45	.....	3,185 45
White River Bridge, Bellingham	6,937 27	.....	6,937 27
Whitefish Bridge, Lybster	499 45	.....	499 45
Whitestone Bridge, McKenzie Tp.	1,821 16	.....	1,821 16
Whitestone Lake Bridge, Parry Sound District	706 40	.....	706 40
Widdifield Bridges	2,132 90	.....	2,132 90
Wilno and Rockingham Bridges	499 34	.....	499 34
Winnipeg River Bridge, Pellatt Tp.	11,039 99	.....	11,039 99
Wissi-Wassa Bridge, Himsworth Tp.	1,886 80	.....	1,886 80
Wollaston Tp. Bridge	765 73	.....	765 73
Wolseley River Bridge, Mattawa Tp.	974 20	.....	974 20
Wolsely Bridge, Guy's Hill, Martland	993 12	.....	993 12
Wright's Creek Bridge, Tp. Casey	1,813 35	.....	1,813 35
Wye River Works	5,176 98	.....	5,176 98
Wassa Bridge, Con. 13, Chisholm	1,415 08	896 05	2,311 13
Wall's Bridge, Big Carp	.....	791 90	791 90
Wassa Bridge, 12th Line, Chisholm	.....	428 86	428 86
Watson Bridge, Brudenell	.....	299 82	299 82
York Branch River Bridge, Tp. Dungannon	1,910 31	.....	1,910 31
Young's Point Lock	31,192 72	.....	31,192 72
Total Public Works	2,771,134 86	130,011 75	2,901,146 61

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure, to 31st Oct., 1916.
DRAINAGE WORKS:	$ c.	$ c.	$ c.
Algoma District Road Drainage	2,217 37	1,372 68	3,590 05
Allan Arcand, Mountain Tp.	2,200 00	.....	2,200 00
Aux Raisin River, Tps. Osnabruck and Cornwall	7,000 00	.....	7,000 00
Baldwin Drain, Mountain Tp.	290 00	.....	290 00
Barkley Creek, Winchester Tp.	1,000 00	.....	1,000 00
Beaver Creek Drain, Cornwall Tp.	750 00	.....	750 00
Bear Lake Outlet, Macpherson (improving)	1,437 83	.....	1,437 83
Becquith Creek Drain, Cumberland and Clarence Tps.	1,000 00	.....	1,000 00
Big Creek Drain, Tps. West and North Tilbury	9,367 30	.....	9,367 30
Big Marsh Drainage, Pelee Island	2,000 00	.....	2,000 00
Black Creek, clearing, Matchedash	496 91	.....	496 91
Bonfield Creek, improving	1,505 86	.....	1,505 86
Brethour Tp., drainage	499 83	.....	499 83
Brook Tp., outlet drain for Durham Creek	1,300 00	.....	1,300 00
Bromley Tp., drainage scheme	1,100 00	.....	1,100 00
Burnett Drain, Elma Tp.	1,500 00	.....	1,500 00
Beauchamp Creek and Extension drain, Co. Grey	.....	1,000 00	1,000 00
Big Creek Drain, Chatham, Dover, grant	.....	5,000 00	5,000 00
Capreol Drainage, Lots 5 and 10, 3rd Con.	800 00	.....	800 00
Capreol Tp., drainage (grant)	399 86	.....	399 86
Carp River Drainage Scheme	2,000 00	.....	2,000 00
Castor Extension and 8th Con., Winchester.	1,600 00	.....	1,600 00
Cavan Tp. Drainage Works	4,000 00	.....	4,000 00
Cobb Lake Drainage, Clarence	3,000 00	.....	3,000 00
Collin's Creek, improvement	796 51	.....	796 51
Crow Lake Channel, improvement	299 96	.....	299 96
Dauphin Drainage Works, Tp. Raleigh	5,000 00	.....	5,000 00
Dawn and Enniskillen Townline drain	2,500 00	.....	2,500 00
Dixon Creek Drain, Roxborough, Cornwall and Osnabruck	2,000 00	.....	2,000 00
Douro Drainage Works, Tp. Douro	1,200 00	.....	1,200 00
Eastnor Tp., outlet drain	2,480 00	.....	2,480 00
East Simcoe District Road, drainage	986 46	816 50	1,802 96
Eldon Tp. drainage	1,500 00	.....	1,500 00
Elma Tp. drainage works	4,000 00	.....	4,000 00
Elson and Crooked Creek drainage scheme, Tp. Dawn	2,000 00	.....	2,000 00
Evanturel Tp. drain	749 24	.....	749 24
Ferris Tp. drain	500 00	.....	500 00
Fish Creek Improvement, Hinchinbrook	388 71	297 49	686 20
Forbes Drainage Works, Tilbury East Tp.	2,000 00	.....	2,000 00
Fraser Creek Drainage, Tp. Roxborough	300 00	.....	300 00
Hagarty Creek Drain, Euphemia and Mosa Tps.	1,000 00	.....	1,000 00
Hardy Creek Drainage Works, Tp. Adelaide	1,500 00	.....	1,500 00
Hardy Creek Drain, Tp. Metcalfe	1,000 00	.....	1,000 00
Hardy Creek Drain, Warwick	225 00	.....	225 00
Harley Tp. drainage	472 33	.....	472 33
Hanmer and Rayside Drainage	1,500 00	.....	1,500 00
Henry Marentette Drain, Sandwich	1,500 00	.....	1,500 00
Hilliard Tp. drainage, 4th Con.	780 00	.....	780 00
Howick Tp. drainage	500 00	.....	500 00
John Taylor Drain, Marlborough and North Gower (grant)	1,000 00	.....	1,000 00
Kenyon, Charlottenburgh, Cornwall, and Roxborough Tps. drainage	700 00	.....	700 00
Lalonde Drainage Works, Roxborough	900 00	.....	900 00

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st Oct., 1916.
DRAINAGE WORKS.—*Continued.*	$ c.	$ c.	$ c.
Little Creek Drain, Tilbury North	2,000 00	.....	2,000 00
Little River, Sandwich East	2,000 00	.....	2,000 00
Little Sauble Drain, Tp. Usborne	1,000 00	.....	1,000 00
Logan North West Drain, Tp. Logan	1,000 00	.....	1,000 00
Long Marsh Drain, extension, Anderdon	3,000 00	.....	3,000 00
Long Swamp Drainage Works (or Davidson) Tp. Keppell	1,500 00	.....	1,500 00
Louise Tp. Drain, Lots 2 to 10, Con. 6	700 00	.....	700 00
Lovelace and Orton Drain, North Gosfield	1,500 00	.....	1,500 00
Lyons Creek, drain, Humberstone (grant)	800 00	.....	800 00
Long Swamp Drain, Chandos	.....	400 00	400 00
Mad River, improvement (conditional)	1,823 30	.....	1,823 30
Manitoulin District Road drainage	2,815 62	2,099 69	4,915 31
Mara Tp. drainage, Sucker Creek, etc.	1,941 72	.....	1,941 72
Mara and Rama Drainage	2,278 44	.....	2,278 44
Maxwell Creek drain, Chatham Tp. (grant)	4,000 00	.....	4,000 00
Medonte Tp. drain	1,800 00	.....	1,800 00
Merrick Creek Drainage Works, South Sandwich Tp.	1,000 00	.....	1,000 00
Michener and Wignell Drain, Humberstone	800 00	.....	800 00
Miller Drain, Tp. Mountain	220 00	.....	220 00
Miscellaneous drainage	27 00	.....	27 00
Moira Lake Drainage, Huntingdon	1,000 00	.....	1,000 00
Monklands Drainage Scheme, Tp. Roxborough	1,200 00	.....	1,200 00
Mud Lake Drainage, Tp. Keppell	963 23	.....	963 23
Muskoka District Road Drainage	940 03	659 02	1,599 05
McDonald Robertson Drain, Lochiel	1,500 00	.....	1,500 00
McFarlane Relief Drain, Dover	4,000 00	.....	4,000 00
McGregor Creek Works, Tp. Howard	2,000 00	.....	2,000 00
McIntyre Creek Drainage Works	2,200 00	.....	2,200 00
McLellan and Booth Creek Drain, Dawn	1,000 00	.....	1,000 00
Nesbitt and Rogers Drains, Tp. Bosanquet	300 00	.....	300 00
Ninth Concession Drain, Brooke	1,000 00	.....	1,000 00
Nipissing District Roads, drainage	4,512 07	1,946 18	6,458 25
North Branch Drainage Works, Tps. Roxborough and Cornwall	2,000 00	.....	2,000 00
North Branch and McIntosh drain, Roxborough (grant)	2,000 00	.....	2,000 00
North-East Drain, Ellice and Logan	1,000 00	.....	1,000 00
Nottawasaga River Drainage	1,368 01	.....	1,368 01
Parry Sound District, drainage	1,941 26	758 97	2,700 23
Pedan Drainage Works, Marlborough Tp.	1,000 00	.....	1,000 00
Pelee Point Marsh Drainage, Mersea (By-law 815)	6,500 00	.....	6,500 00
Pelee Island Drainage	3,500 00	.....	3,500 00
Perche Drainage Scheme, Sarnia (grant)	1,500 00	.....	1,500 00
Petite, Castor River and Annabel Creek Drainage Works, Tp. Winchester	7,700 00	.....	7,700 00
Pickerel River Improvement, Huntingdon (conditional)	500 00	.....	500 00
Pike Creek Drainage Scheme, Maidstone and Sandwich	2,000 00	.....	2,000 00
Pike Drainage Works, Tp. Tilbury East	2,000 00	.....	2,000 00
Pottawatomie River Drainage Works, Tp. Derby	3,500 00	.....	3,500 00
Pulse Creek Drain	1,500 00	.....	1,500 00
Rama Tp. Road, drainage	200 00	283 50	483 50
Rainy River Roads, Drainage	17,959 16	3,435 37	21,394 53
Richmond Drain, Colchester South (grant)	1,500 00	.....	1,500 00

STATEMENT No. 2.—*Continued.*

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1915.	Expenditure Fiscal Year ending 31st Oct., 1916.	Total Expenditure to 31st Oct., 1916.
DRAINAGE WORKS—*Continued.*	$ c.	$ c.	$ c.
Running Creek, dredging west of 5 and 6 Side Road	3,500 00	.....	3,500 00
Ruscomb Drainage Works, Tp. Rochester	9,300 00	.....	9,300 00
Rusdale Creek, Bathurst Tp. drain	1,200 00	.....	1,200 00
Silver and Castor Works, Tps. Mountain, Osgoode, South Gower and Winchester	2,400 00	.....	2,400 00
Silver Creek and Castor River	1,600 00	.....	1,600 00
Snake River, Tp. Bromley	7,700 00	.....	7,700 00
South Branch Drain, Cornwall (grant)	3,000 00	.....	3,000 00
Spring Creek Drainage Works, Lochiel Tp.	2,000 00	.....	2,000 00
Springer Tp. Drain	610 00	.....	610 00
Springer Tp. Drain (Colonization Roads)	115 00	.....	115 00
Stewart Proulx Drain, Lochiel	800 00	.....	800 00
Stoney Creek Drain, Cornwall	1,500 00	.....	1,500 00
Sturgeon Falls District Drainage	3,291 81	1,870 71	5,162 52
Sudbury District Drainage	4,426 21	2,373 91	6,800 12
Sundry Drainage Works (charged to municipalities)	329,980 93	.....	329,980 93
Survey and Drainage Swamp Lands (Prov. Acct.)	36,600 51	.....	36,600 51
Temiskaming District, drainage	6,613 72	1,644 82	8,258 54
Tilbury East, outlet drain	3,020 00	.....	3,020 00
Toulouse Drain, Dover	500 00	.....	500 00
Van Camp Drainage Scheme	2,700 00	.....	2,700 00
West Luther Drainage	2,000 00	.....	2,000 00
Whitebread Pumping Scheme, Dover	1,000 00	.....	1,000 00
Whitebread Drainage Work, Tp. Sombra	4,000 00	.....	4,000 00
Drainage	619,591 19	23,958 84	643,550 03
Colonization and Mining Roads	8,185,823 92	253,539 11	8,439,363 03
Good Roads—Highway Improvement	2,061,422 90	270,513 34	2,331,936 24
Aid to Railways	9,458,952 65	139,112 54	9,598,065 19

NOTE:

Certificates issued to Railways	$10,515,892 45	
Cash paid direct to Railways	2,337,982 42	
Aid granted 2,836,007 miles.	$12,853,874 87	
Certificates outstanding	3,255,809 68	
Actual cash expended to 31st October, 1916	$9,598,065 19	
Totals	44,831,582 71	2,161,037 75	46,992,620 46

RECAPITULATION:

Total Public Buildings	21,734,657 19	1,343,902 17	23,078,559 36
" Public Works and Drainage	3,390,726 05	153,970 59	3,544,696 64
" Colonization and Mining Roads	8,185,823 92	253,539 11	8,439,363 03
" Good Roads, Highway Improvement	2,061,422 90	270,513 34	2,331,936 24
" Aid to Railways	9,458,952 65	139,112 54	9,598,065 19
Grand Totals	44,831,582 71	2,161,037 75	46,992,620 46

Department of Public Works, Ontario.
Toronto, February, 1917.

M. C. O'DONNELL,
Accountant Public Works.

STATEMENT No. 3.

Being a classified statement showing the expenditure on Capital Account for Public Buildings, Public Works, Colonization Roads, Good Roads (Highway Improvement), Aid to Railways, etc. (1) The total expenditure for thirty-seven years and six months, from the 1st of July, 1867, to the 31st of December, 1904; (2) the total expenditure for ten years and ten months from the 1st of January, 1905, to the 31st October, 1915; (3) the expenditure for one year to the 31st of October, 1916; and (4) the grand total expenditure from the 1st of July, 1867, to the 31st of October, 1916.

Name of work.	Expenditure 1st July, 1867, to 31st Dec., 1904.	Expenditure, 1st January, 1905, to 31st October, 1915.	Expenditure for year to 31st October, 1916.	Total Expenditure to 31st October, 1916.
	$ c.	$ c.	$ c.	$ c.
1. Hospitals for the Insane, etc., at Toronto, Whitby, Mimico, London, Hamilton, Kingston, Brockville, Orillia, Cobourg, Penetanguishene and Woodstock	4,774,584 48	3,272,689 41	775,143 47	8,822,417 36
2. Penal Institutions, viz., Reformatory for Females; Reformatory for Boys; Central Prison, Toronto; New Provincial Prison, Guelph, including abattoir; and Industrial Farms, Fort William, Sault Ste. Marie and Burwash	1,356,979 02	2,024,272 40	261,791 04	3,643,042 46
3. Educational Institutions, viz., The Ontario School for the Deaf, Belleville; The Ontario School for the Blind, Brantford; School of Practical Science, Toronto; Normal and Model Schools, at Toronto and Ottawa, Normal Schools at London, Stratford, Hamilton, Peterborough and North Bay, English-French Training School, Sandwich, and Hygienic Building, London	1,791,329 68	1,272,950 29	23,666 70	3,087,946 67
4. Agricultural Institutions, viz., Ontario Agricultural College, Guelph; Winter Fair Building, Guelph; Fruit Experimental Station, Jordan Harbour; Dairy Schools, Kingston and Strathroy; Dairy Farm, Algoma; Farm, Mimico; Ontario Veterinary College, Toronto; and Ontario Government Office Building, London, England	719,257 51	883,383 56	31,128 17	1,633,769 24
5. Buildings for Administration of Justice, being Osgoode Hall, Toronto, and Court Houses, Lockups, Registry Offices, etc., in the Districts of Algoma, Thunder Bay, Muskoka, Parry Sound, Nipissing, Manitoulin, Sudbury, Rainy River, Kenora and Temiskaming	455,731 09	854,870 48	66,487 29	1,377,088 86

STATEMENT No. 3.—*Continued.*

Name of work.	Expenditure 1st July, 1867, to 31st Dec., 1904.	Expenditure 1st January, 1905, to 31st October, 1915.	Expenditure for year to 31st October 1916.	Total Expenditure to 31st October 1916.
	$ c.	$ c.	$ c.	$ c.
6. Parliament and Departmental Buildings, and old and new Government House	1,776,474 75	2,515,601 28	184,011 90	4,476,087 93
7. Works for the improvement of Navigation, such as locks, dams, slides, etc., and works for the improvement of Transportation, such as bridges, piers, roads, etc	1,243,557 93	1,510,012 97	130,011 75	2,883,582 65
8. Drainage Works; Grants and Advances to Municipalities..	393,338 27	204,358 92	23,958 84	621,656 03
9. Miscellaneous Expenditures, viz., Brock's Monument; Niagara River Fence; Clearing of Log Houses, Township of Ryerson; Temiskaming Surveys; Immigration Offices: Lodging House; Children's Shelter, Toronto; Fish and Game Department Boat Houses, Hatchery Building, Compensation to injured workmen, etc.....	54,590 07	21,401 13	1,673 60	77,664 80
10. Colonization and Mining Roads	4,059,464 44	4,126,359 48	253,539 11	8,439,363 03
11. Aid to Railways (actual cash expended)	7,456,173 01	2,002,779 64	139,112 54	9,598,065 19
12. Good Roads, Highway Improvement and Object Lesson Roads	114,438 05	1,946,984 85	270,513 34	2,331,936 24
Totals.....	24,195,918 30	20,635,664 41	2,161,037 75	46,992,620 46

Department of Public Works, Ontario.
Toronto, February, 1917.

M. C. O'DONNELL,
Accountant Public Works.

STATEMENT

OF

SECRETARY

AND

LAW CLERK.

STATEMENT No. 4.

Showing the several contracts and bonds entered into with His Majesty during the twelve months ending the 31st of October, 1916, in connection with the Public Buildings and Works, subject to the control of the Public Works Department.

Date.	Location of Work.	Subject of Work.	Contractors.	Sureties.	Particulars.	Amount.
1915. Nov. 17....	Stanley Bridge, over Kaministiquia River, Township of Paipoonge.	Erection and supply of steel spans.	The Hamilton Bridge Works Co., Ltd., Hamilton, Ont.	.....	.....	$4,431 00
Dec. 24....	Combermere Bridge, over expansion Madawaska River, at Combermere, County of Renfrew.	Supply and delivery fabricated steel, f.o.b. Barry's Bay, Ont.	The Hamilton Bridge Works Co., Ltd., Hamilton, Ont.	.....	.....	4,950 00
Dec. 16....	Fort William, Ont., Registry Office.	Supply, delivery and setting up complete, steel fittings.	The Steel Equipment Co., Ltd., Ottawa.	.....	.....	3,495 00
Dec. 22....	Sault Ste. Marie, Gaol Building.	Plumbing and heating.	The Cochrane Hardware, Ltd., Sudbury.	William Joseph Bell and George Reginald Gray, both of the Town of Sudbury, Ont.	.....	9,685 00
1916. Feb. 22....	Sault Ste. Marie, Gaol Building.	Supply and installing electric dumb waiter.	Otis-Fensom Elevator Co., Ltd., Toronto.	.....	.....	984 00
March 9...	Cross Lake Bridge, Con. 8, Township of Kennebec, Ont.	Supply of steel superstructure.	Dominion Bridge Co., Ltd., Toronto.	.....	.....	3,270 00
May 4.....	Parliament Buildings, Toronto.	Supply and erection of fire escape, East Wing.	The Page Wire Fence Co. of Ontario, Ltd., Toronto.	.....	.....	1,421 07

June 1.....	Guelph, Ontario Agricultural College.	Alteration and addition to Chemistry Building.	P. H. Secord & Sons, Brantford, Ont.	William Arthur Hollinrake, Barrister, and Walter Curtis Boddy, Banker, both of the City of Brantford, Ont.	.....	14,693 00
May 31....	Toronto, Government House and Parliament Buildings	Supply of hard and soft coal and pine wood, season 1916-17.	The Standard Fuel Co., of Toronto, Ltd.	Charles T. Logan and Gerald Nash, both of the City of Toronto.	Stove coal, per ton ..... Pea coal, per ton Egg coal, per ton Pine wood, per cord	7 45 5 46 7 45 6 50
May 31....	Toronto, Osgoode Hall, Normal School and Ontario Veterinary College.	Supply of hard and soft coal, hardwood and pine slabs, season 1916-17.	P. Burns & Co., Ltd., Toronto.	Geo. D. McDonald, John J. Burns, both of Toronto.	Grate coal, per ton ..... Stove coal, per ton ..... Egg coal, per ton Soft coal, per ton Soft coal (mine run) per ton .. Hardwood, per cord ..... Pine slabs, per cord	7 25 7 50 7 50 5 75 5 35 9 90 6 00
June 1.....	Ottawa Normal and Model Schools.	Supply of coal, season 1916-17.	Independent Coal Company, Ltd., Ottawa.	F. Gallagher and Fred. S. J. Slattery, Ottawa.	Egg coal, per ton Stove coal, per ton ..... Soft coal, per ton	8 10 8 10 5 50
June 1.....	Stratford Normal School.	Supply of coal and wood, season 1916-17.	Caspar Schneider, Stratford, Ont.	Conrad Dannecker, George Schneider, both of the City of Stratford.	Small egg coal, per ton ..... Pine slabs, per cord	6 75 4 50
June 12....	North Bay Normal School.	Supply of coal and wood, 1916-17.	M. E. Gagnon and Geo. A. Gagnon, trading under the name, style and firm of the North Bay Fuel Co.	Patrick McCool and George W. Smith, North Bay.	Large egg coal, per ton ..... Nut coal, per ton Pine slabs, per cord ..... (Winter coal delivery, $8.40 per ton).	7 90 7 90 4 00

STATEMENT No. 4.—*Continued.*

Showing the several contracts and bonds entered into with His Majesty, during the twelve months ending the 31st of October, 1915, in connection with the Public Buildings and Works, subject to the control of the Public Works Department.

Date.	Location of Work.	Subject of Work.	Contractors.	Sureties.	Particulars.	Amount.
June 1.....	Hamilton Normal School.	Supply of hard coal and pine slabs, 1916-17.	Gillies-Guy, Ltd., Hamilton.	H. W. Robinson and Jan McKenzie.	Egg coal, per ton Pine slabs, per cord	6 75 6 00
June 1.....	London Normal School.	Supply of hard coal and pine wood, 1916-17.	Alexander Pollard, London.	George R. Kettle and W. R. Hodges, both of London.	Large egg coal, per ton ..... Pine wood, per cord	7 00 5 00
June 1.....	Peterborough Normal School.	Supply of coal and pine wood, 1916-17.	H. B. Taylor & Son, Peterborough.	William Noftall and J. F. Allen, Peterborough.	Large egg coal, per ton ..... Pine slabs, per cord	7 80 2 75
June 1.....	Belleville School for the Deaf.	Supply of hard and soft coal, 1916-17.	Downey Coal Co., Belleville, Ont.	Charles N. Sulman and J. E. Walmsley, both of Belleville.	Small egg coal, per ton ..... Stove coal, per ton ..... Nut coal, per ton Best grade slack, del. from dock. Best grade slack, del. from cars.	7 95 7 95 8 20 4 70 4 80
June 1.....	Brantford School for the Blind.	Supply of hard and soft coal, 1916-17.	Daniel McDonald, of the City of Brantford.	Stephen P. Pitcher and John Fair, both of Brantford.	Stove coal, per ton ..... Nut coal, per ton Select lump, per ton	6 45 6 70 4 80
Aug. 3.....	Guelph Agricultural College.	Reconstruction of sewage disposal plant.	Mahoney Building Co., Guelph.	.....	15 per cent. on material and labour as per specifications ..	

Oct. 6.....	Toronto, Parliament Buildings.	Construction and setting up steel map case in Archives Branch.	Steel Equipment Co., Ltd., Ottawa.	.....	.....	2,791 00
Oct. 16.....	Guelph Agricultural College.	Heating, plumbing and gas-fitting in addition to Chemistry Building.	Albert W. Smith Co., Ltd., Guelph.	.....	15 per cent. on labour and materials used.	

Department of Public Works, Ontario.
Toronto, February, 1917.

H. F. McNAUGHTEN,
Secretary and Law Clerk Public Works Department, Ontario.

Tenth Annual Report

OF THE

GAME AND FISHERIES DEPARTMENT

1916

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:

Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty

1917

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TORONTO

To His Honour Sir John Strathearn Hendrie, K.C.M.G., C.V.O., a Colonel in the Militia of Canada, etc., etc., etc.

Lieutenant-Governor of the Province of Ontario.

May It Please Your Honour:

I have the honour to submit herewith, for the information of Your Honour and the Legislative Assembly, the Tenth Annual Report of the Department of Game and Fisheries of this Province.

I have the honour to be,
Your Honour's most obedient servant,

F. G. Macdiarmid,

Minister of Public Works and Highways.

Toronto, 29th March, 1917.

TENTH ANNUAL REPORT

OF THE

Department of Game and Fisheries of Ontario

To the Honourable F. G. MACDIARMID,

Minister of Public Works and Highways.

SIR,—I have the honour to submit for your consideration the Tenth Annual Report of the Department of Game and Fisheries, which is for the fiscal year ended October 31st, 1916.

The catch of fish this year was quite satisfactory even if it did not reach the enormous amount caught the year before. The herring catch was indeed good and as the Great Lakes of Ontario are the only waters in Canada where fresh water herring can be procured, great care should be exercised in their preservation. Requests are being continually made to reduce the size of mesh. This, I think, would be a great mistake and would, in the near future, lead to the practical extermination of this valuable food fish. Hatcheries should also be established to propagate this species for they apparently thrive when given a chance in waters suitable for their existence. The whitefish and salmon trout seem to be on the increase, no doubt owing to the large quantities of spawn deposited each year from the hatcheries. It will be interesting to watch the result of the abolishing of the close seasons for these species. The Department feels discouraged at times from the lack of co-operation with a certain number of the fishermen, who seem bent upon catching fish by any means if allowed, regardless of the consequences, and since the abolishing of the close season they are constantly applying for licenses to set nets in waters that are well known to have shoals where these fish spawn.

The demand for fish by the public has increased considerably owing to the high cost of meat, and there should be a means of lessening the expenses of living. The residents of Ontario have not been educated to the use of this food, and strange to say that in many places, villages and towns inland, only a few miles from some of our principal fishing ports, will have several butcher shops and the residents never see a fresh fish from the beginning to the end of the year save those caught by hook and line in the nearby streams.

PROVINCIAL HATCHERIES.

The erection of a hatchery begun at Normandale last year was unavoidably delayed but will be completed this season and will be most efficiently equipped for the purpose of hatching whitefish and herring.

The hatchery at Mount Pleasant where the raising of bass and speckled trout is carried on for restocking the inland lakes and streams was not so successful this year owing to the heavy rains in the spring which caused turbid waters resulting in a considerable loss to the speckled trout fry and delay in procuring the parent bass for the bass ponds, notwithstanding these difficulties the result of the hatch was very satisfactory and the superintendent of this hatchery should be commended for overcoming difficulties that he before never had to contend with.

Game.

Following suggestions made in last year's report, some amendments to the Act were made by the Legislature during the session of 1916. One of these amendments provided for a trapper's license, and the other for an open season for beaver and otter, being the first open season for these animals in twenty years.

The introduction of the trapper's license will, I believe, prove acceptable to the great majority of the trappers of the Province, many of them having asked to have all trappers placed under license with a suitable fee attached. In drafting the amendment, however, it was thought advisable to exempt farmers and farmers' sons when trapping upon their own lands.

In providing for an open season for beaver and otter, it was provided that they should be taken only during such periods and upon such terms and conditions as might be prescribed by the Lieutenant-Governor in Council.

The result of these two amendments to the Act are not available for this report, the trapping season not opening until after the end of our fiscal year.

The treaty between Great Britain and the United States regarding both migratory game and non-game birds is still under consideration, but will likely be completed during the year. When this treaty is signed there is no doubt it will require some changes in our Act in order to comply with its provisions.

The amendment prohibiting the purchase or sale of wild ducks, wild geese or other waterfowl has, I believe, met with general approval.

As in past years I cannot close without thanking the Superintendent of Provincial Police and his officers for the assistance rendered the Department during the year.

D. McDonald,
Acting Deputy Minister of Game and Fisheries.

January 8, 1917.

D. McDonald, Esq.,
Acting Deputy Minister of Game and Fisheries, Toronto, Ont.

Sir,—When this barbarous world wide war ends, enforced strenuous conservation will be imperative. It may seem inconsistent to advocate conservation of our resources while the old world powers are destroying the world's most valuable assets, the lives of the inhabitants of their respective countries. When the despicable barbarians are relegated to restricted confines of their despised country, we, as an important part of the glorious Empire on which the sun never sets, should be prepared by a most rigid system of conservation, not only to make our Province, as far as possible, self-sustaining, but also to enable our Dominion to meet its immense obligations and provide for our brave fellow Canadians and their dependants unable to provide for themselves. We are more directly concerned with the natural products of our Department and the conservation and perpetuation of the same. While your Department has under difficult conditions succeeded in conserving fish in Provincial waters, whom are we conserving it for? As far as I know we are under no obligation to protect our fish for American consumption. In consequence of the present high price of meat, a far larger amount of fish caught in the waters of the Province should be available for home consumption. Tug fishermen, who as a rule ship their entire catch to their headquarters in Buffalo and other United States receiving stations, should be compelled to pay a royalty on all

such shipments. Many of these fish exporting fishermen, boasting of their loyalty and patriotism during these strenuous times, should be made to practise what they preach.

Laws and Their Enforcement.

The relaxation in the game laws for the time being by the thoughtful kindness of the Government will be a much appreciated boon to the unfortunate settlers in the fire swept northern parts of the Province.

Hunting.

Ducks and big game shooting has furnished the principal sport this season. The fact that both of these were found in numbers great enough to satisfy the sportsmen will also be satisfactory to you.

Submitted by,

Your obedient servant,

E. Tinsley,
Superintendent.

D. McDonald, Esq.,

Acting Deputy Minister of Game and Fisheries.

Sir,—I beg to submit my annual report for 1916.

I understand that commercial fishermen have had an exceedingly poor year, especially the Hoop Net fishermen. I would again recommend that all commercial fish buyers be compelled to take out a license, and that they be compelled to supply the home markets before exporting any fish of any kind. The tourist traffic during the past year was the lightest in years, caused, no doubt, by the terrible war. Many of the tourist hotels did not open in 1916.

I find on investigation that owing to the sudden lowering of the waters by order of the Dominion officials, in the early spring sometimes after the bass and maskinonge have spawned, that large quantities of spawn are left on the shores and which are wasted. This has happened on the Rideau waters, also on the Kawartha Lakes. Some arrangements should be made between the two governments that the waters should not be either raised or lowered during the spawning seasons. I understand that game of all kind was fairly plentiful in the season of 1916. Prohibiting the sale of ducks and limiting the number to be killed is having a good effect.

Alfred Hunter,
Inspector of Game and Fisheries.

BEAUMARIS, 31 Oct., 1916.

To Acting Deputy Minister, Game and Fisheries, Toronto.

SIR,—I beg to submit my annual report as to the game and fish in that portion of the Province over which I have the supervision. During the past season fishermen have met with varied success. Since the very hot weather in July anglers have secured very fine catches of bass. These fish seem to be holding their own in the Muskoka waters, and with the liberal restocking which has been carried on with fry from the hatcheries we may look forward to a vast increase in years to come. About six million of pickerel fry have been placed in the Muskoka Lakes by the parties who operate the Port Carling hatchery. These parties are worthy of the highest praise for the trouble they took and the expense they are put to for the public good.

The change in the close season for lake trout and whitefish is going to have most beneficial effects with regard to the increase in these classes of fish.

During the hunting season of 1915 sportsmen seemed to have had satisfactory results. There is no doubt but that the cutting down the number of deer to one for each man has resulted in the keeping up of the stock, which does not seem to have appreciably failed within the past few years. Moose are not so plentiful, and I think the Department will soon see the advisability of protecting these noble animals for a term of years. Had it not been for the illegal killing of these animals there would have been an unlimited supply.

Partridges are scarce and the two years protection enacted will no doubt bring about anticipated results.

Beaver, I am most pleased to see, are coming in this fall. We have had more trouble over these animals during the past year than all other game combined. There have been innumerable complaints from settlers who have had their meadows flooded, municipalities and private parties whose roads or other property has been damaged by the work of these animals. In all cases where complaints have reached us we have successfully combatted the evil, either by trapping out the beaver or dynamiting their dams. In resorting to the latter resource, permanent success has not always resulted, as we have found the dams reconstructed in a few days in several instances. Wolves are reported very numerous in several Muskoka municipalities. I have only heard of one of these marauders having been killed.

Regarding "insectivorous" birds, I noted a marked increase during the last spring in several varieties, especially robins. I have no doubt that the legislation enacted in several of the United States, coupled with our Ontario Act, will help in time to replace the depletion of these feathered songsters.

All of which is respectfully submitted.

I am, Sir,

Your obedient servant,

JOHN H. WILLMOTT,
Warden.

D. McDONALD, ESQ.,

Acting Deputy Minister of Game and Fisheries, Toronto, Ont.

NORTH BAY, ONT., November 3rd, 1916.

DEAR SIR,—I have the honour of submitting my annual report for the year 1916.

Fishing has been exceptionally good this season, many fine specimens of maskinonge were caught in Lake Nipissing and French River. The opening up of several inland lakes for net fishing has proved a success in supplying the local markets.

There was an increase in the number of tourists visiting this district this year, many of them reporting very favourably on their catches.

Game: Moose, plentiful in some parts, but the fires have destroyed many of them, in one place eleven were found dead together. Caribou, none in this locality.

Deer, quite plentiful. Partridge, very scarce, but no doubt the two years close season will have the desired effect. Wild duck, plentiful. Wild geese, scarce. Plover and snipe appear to be increasing.

Fur-bearing Animals: Beaver, plentiful and causing considerable damage to roads and private properties. The open season is quite desirable. Otter and mink appear plentiful, also muskrat. The close season for rats in the fall will no doubt be a success, as many of the young rats are trapped in the fall when the fur is of little value. All other fur-bearing animals appear to be quite plentiful, which is due to the small amount of trapping done during the past two years.

Wolves appear to be increasing in number.

The licensing of trappers is already meeting with marked success, but it will take time to get the people educated to the idea.

I would again like to recommend a general gun license. I notice a remarkable increase in the number of hunters from the older parts of Ontario, if this continues something will have to be done to further preserve our game in the north country. Our forests are fast disappearing, what with fires, settlers and lumbering, and I think a provision should be made for a new game preserve at an early date.

I would also like to recommend that hunters be allowed a limited time in which to reach their camps, I consider that three days from the time they detrain is quite sufficient, it is a common occurrence for many clubs to go in seven and eight days before the season, and in many cases I am satisfied that a large amount of game is killed before the season opens.

There have been a number of convictions during the past year: many violations, I am pleased to say, were reported by residents of the rural districts, who are beginning to realize the necessity of protecting our game.

Your obedient servant,

G. M. PARKS,
Warden.

SAULT STE. MARIE, Nov. 13th, 1916.

D. McDONALD,

Acting Deputy Minister of Game and Fisheries Department, Toronto.

Commercial fishing: In the early part of the season the fishing was light in Lake Superior and Lake Huron on the north shore, but the fishermen report better catches in the month of October and they say that when the full returns are in that the catch for the season will be better than for 1915.

Speckled trout are plentiful in all the rivers and streams in this district.

Bass of all kinds are plentiful in this district.

Pickerel are not as plentiful as I would like to see them.

Whitefish and salmon trout are very plentiful in some of the inland lakes in this district. I would say that net fishing should be allowed for two or three years in those lakes.

Brown trout are plentiful in most of the inland lakes.

Rainbow trout are increasing in Lake Superior.

Maskinonge are very scarce in the District of West Algoma.

Pike and suckers are getting more plentiful every year in the inland lakes and the bays of Lake Superior.

GAME ANIMALS.

Deer are plentiful in this district.

Moose are plentiful in this district, but would say that the hunting season should be from the 15th of November to the last of November, with no extension of the open season.

Caribou: there is none in this district; would say that the Department should stock Michipicoten Island with caribou, it is one of the best places in this district that I know to have these animals as no hunters can get to them in the winter. It is a big island with lots of feed for a big herd.

Ducks and all water fowl are scarce in this district.

Grouse and partridge are scarce in this district.

Rabbits are more scarce this season than they have been for years.

Black squirrels; none in this district.

Wild turkeys; none in this district.

Woodcock: none in this district.

Beaver very plentiful all over the district.

Mink; scarce in this district.

Muskrats; scarce in this district.

Otter; not plentiful.

The law has been well observed throughout this district. There have been some violations, but the parties have been punished. The patrol service on the lake has not been of much service this year only to make expenses of one cause or another. We should have a better patrol outfit on this end of Lake Superior than we have at the present time to be of any service in looking after the fisheries.

J. T. ROBINSON,
Warden.

SIMCOE, ONTARIO, 30th Oct., 1916.

D. MCDONALD, ESQ.,

Acting Deputy Minister of Game and Fisheries, Toronto, Ontario.

SIR,—I have the honour to submit my report for 1916.

Speckled Trout: These fish are decreasing in the streams of this district, and I would advise more fry being planted in the future so as to keep up the supply, as the brooks of the County of Norfolk are particularly well adapted for the propagation of this game fish.

Bass: The bass fishing at Long Point Bay has been the best for a number of years, and the size is still increasing every year.

Commercial Fish: The fishermen report that the gill net fishing has been good. The seines have been successful. The experiments with the carp ponds continue to be successful, the fishermen being able to catch the carp when they are plentiful and at low price and preserve them in the pond until the fish are scarce and the price high. The carp in Long Point Bay have very much increased in number and the price during the year has been much higher than ever before, so that this coarse fish is now one of the best paying commercial fish.

Quail and Ruffed Grouse: The quail are still very scarce in this district, the number being practically the same as last report. Ruffed grouse are very scarce and are decreasing in number more than they have for a number of years.

Woodcock: These are still very scarce, but are reported to be slowly increasing in number.

Black Squirrels: There has been a decided increase in number of these squirrels. The sportsmen attribute this to the short season that they are allowed to be shot.

Wild Geese: These birds continue to be very scarce, although a few are seen at Long Point.

Wild Ducks: Long Point district continues to have more ducks than formerly. The black duck, mallard and pin tail are very numerous, an increased number of black duck and wood ducks have bred in the marshes about Long Point Bay, and it has been reported that some young broods of pin tail ducks were seen. The canvasbacks, redhead and blue bills seem to be here in about as large numbers as usual.

Fur-bearing Animals: Muskrats continue to rate the highest among these animals in this district. Trappers report a very good catch last spring. This is attributed to the fact that some of the companies and others owning marshes prohibited the trapping in their marshes during the previous season, leaving a larger breeding herd than usual in the marshes.

The game laws in this district have been well observed, the Deputy Wardens and Overseers have performed their duties well, so that there have been very few complaints of the infringement of the laws.

I have the honour to be, Sir,

Your obedient servant,

W. BURT,
Game and Fisheries Warden.

WINDSOR, Nov. 23rd, 1916.

D. McDONALD, ESQ.,

Acting Deputy Minister of Game and Fisheries:

SIR,—I have the honour to submit my annual report.

During the year I have visited the greatest part of my district and also patrolling all the waters of Lake Erie in my district, and Detroit River, Lake St. Clair, River St. Clair and small portion of Lake Huron, with yacht *Hopewell,* which I approve a good success for game and fisheries protection. I also sold more permits to Americans to fish with hook and line than any other years. For the Detroit River I have sold over eight hundred dollars worth. The angling of the Detroit River has been better this year than the years I know of. Perch and pickerel has been caught by great numbers of anglers. Black bass also being good for angling this year around Lake Erie and Lake St. Clair, and Mitchell Bay. The net fishermen had a fair year of fishing. The carp has not been caught very plentiful. The catch of other fish is about the same. The whitefish in Lake Erie and Detroit River is showing very fair now. On account of the big blow last month the fishermen through Lake Erie have fished about half of their number of nets, so I expect their catch of whitefish might be small. I think the Government should built hatcheries for hatching herring on Lake Erie. I think they are decreasing.

In regard to game: Quail has been reported by farmers and sportsmen being increasing in numbers. The field trail have found plenty of birds to work their dogs a couple of weeks ago. The Hungarian partridge are also reported doing well, our home partridge not increasing any in Essex and Kent County. Woodcock are about the same as previous year. English pheasant are not plentiful except around Pelee Marsh, there are a few around there. Snipe was very scarce last fall around Lake Erie, Detroit River, Lake St. Clair and Mitchell Bay. There have been more varieties of ducks this fall than we have seen for many years. The sportsmen have got good shooting this fall. Wild geese about the same as other years, except on the reserve of Jack Miner; they are more than any other year. it is a good reason for the way he feeds them and protects them. The Government should give him all the protection to assist him to protect these birds. It would show what a person could do by being kind to the wild game. Black and grey squirrels in Essex County are very scarce, and there should be a closed season on them. In Kent and Lambton Counties they are more plentiful. There should be a bag limit per day and not allowed to sell them. Muskrats are plentiful, and I am pleased to hear that there is a trap license and a short season for trapping. And the trappers seem to be pleased with the new regulation.

The game and fish laws have been very well observed during the year past. Very few seizures or prosecutions happened last year. The Deputy Wardens and Overseers have performed their duty well towards me to give assistance and information towards the poachers and other matters.

Your obedient servant,

V. CHAUVIN,
Warden.

TORONTO, Dec. 7th, 1917.

D. McDONALD, ESQ.,

Acting Deputy Minister of Game and Fisheries.

SIR,—I beg to submit my report for the season of 1916.

The past season proved to be the worst that was ever experienced by both the licensed fishermen and anglers around Toronto. Were it not for the formerly despised carp none of the licensed fishermen would have made half a decent living. With the advent of the trunk sewer it was expected that the fishing would improve and that the fish would return to their old haunts, but up to the present there has been no apparent increase, the sewer has stopped the pollution and if restocking with lake trout and whitefish fry was carried out on a liberal scale the fishing might be brought back to something like what it was in old times.

The game and fishery laws were well observed, very few infractions of the act occurred. Both the Island constables and the city police deserve the thanks of the Department for the interest they take and the work they do in the protection of the fish and game.

The majority of returning deer hunters say they found the deer about as plentiful as ever, but all report the partridge as very scarce, and unless next spring turns out a more favourable breeding season than the last it will require another year of protection to get up anything like a good stock of birds.

With reference to the restocking of the waters of the Province with game fish by the Department, am sorry to report that the results in a great many instances are not at all what they should be, and unless means are taken, before the young fish are planted, to rid the waters of the ling and other coarse fish that infest them the results can never be expected to be any better. The waters can be made fairly safe for the young fish if the destruction of their enemies is gone about in a business-like way.

The output of the bass ponds and brook trout hatchery at Mt. Pleasant was not quite as large as last year, owing to the unprecedented heavy and incessant rains during the months of April, May and June, the source of the water supply became polluted and proved fatal to a great number of the young trout that had just hatched out. It did not affect the young bass in the ponds. The output about equalled last year's, which was a record. The same calamity can never occur again owing to the wisdom and energy of Superintendent Edwards, he having unearthed a supply of pure spring water on the hatchery property which has been piped direct to the hatchery from its source and adds immensely to the value of the property as a hatchery proposition.

The Ontario Government fish hatchery at Mt. Pleasant is to-day one of the beauty spots of the Province, transformed from a rough swamp bottom all through indefatigable efforts of Superintendent J. T. Edwards.

Yours respectfully,

HENRY WATSON,
Warden.

Mohawk, Dec. 5th, 1916.

D. McDonald, Esq.,

Acting Deputy Minister of Game and Fisheries.

Dear Sir.—I beg to submit the following, my eighth annual report, in connection with my work at the Mt. Pleasant hatchery.

We were again very successful in propagating small mouth black bass, which is the most important species of fish propagated at this hatchery, the output of which was greatly in excess of that of any former year, and totalled nearly one million fingerlings, which were successfully transplanted and the different waters restocked receiving a substantial supply, which should thereby greatly improve the fishing in them if they are allowed to mature.

Brook Trout.

The output of brook trout was not quite up to that of last year, which was no fault of ours, but was caused by continued rains, thereby polluting our supply of spring water. A new supply of water has been installed and better results may be looked for in future.

Lake Trout.

Five hundred thousand lake trout from the Wiarton hatchery, which were in excellent condition, were also successfully transplanted.

Restocking.

Mr. Henry Watson, Special Officer for Restocking, again had charge of that important duty and good results may shortly be looked for.

Construction Work.

Some 900 feet of riprapping was done this season, and as no stone was available in this vicinity, cement blocks were made and laid in their stead. Between 1,800 and 1,900 feet of piping was also put down, thus connecting a new supply of spring water to be used for hatching trout. A dike was also built to guard against flood in spring time.

Fish Car.

Fish car "Beaver" had a good appearance since its having been newly painted. The courtesy and assistance rendered by the different railway officials was all that could be desired.

The Hatchery.

The hatchery again presented a fine appearance, the flowers and grounds were greatly admired by the many thousands who visited the hatchery this season.

There is still room for another bass pond. If help is available would recommend its construction this coming season.

In closing this report I desire to extend my warmest thanks for the cordial assistance and hearty co-operation received at the hands of your Department during the year.

I remain,

Your obedient servant.

J. T. Edwards,
Superintendent.

OUTPUT OF FISH FROM THE MOUNT PLEASANT HATCHERY, IN DETAIL.

No. 1 Fingerlings.

Cameron Lake, Peterborough County	70,000
Balsam Lake, Peterborough County	80,000
Lake Simcoe, County of York, South Shore	100,000
Lake Simcoe, County of York, North Shore	100,000
Fox Lake, Parry Sound	5,000
Dalhousie Lake, Lanark County	10,000
Gull Lake, Frontenac County	30,000
Clear Lake, Frontenac County	30,000
Sharbot Lake, Frontenac County	75,000
Burritt's Rapids, Grenville County	30,000
Brown's Lake, Peterborough County	25,000
Stoco Lake, Hastings County	30,000
Moira Lake, Peterborough County	30,000
Cole's Lake, Frontenac County	30,000
Mississippi Lake, Lanark County	70,000
Bass Lake, North Simcoe County	25,000
Riley's Lake, District of Muskoka	25,000
Muskoka Lake, District of Muskoka	50,000
Joseph Lake, District of Muskoka	50,000
Cache Lake, Algonquin Park	15,000
Clear Lake, South Renfrew County	20,000
Total Fingerlings	900,000

PARENT BASS.

River Neeth, Brant County	300
Cache Lake, Algonquin Park	150
Total Parent Bass	450

BROOK TROUT FRY.

No. 2 Fingerlings.

Trout Fry, Waters Vicinity Simcoe, Norfolk County	30,000
Sauble River, Grey County	25,000
Mad River, South Simcoe County	25,000
Pine River, South Simcoe County	40,000

LAKE TROUT FRY.

Smoke Lake, Algonquin Park	80,000
Cache Lake, Algonquin Park	120,000
Lake of Bays, Muskoka District	100,000
Rideau Lakes, Leeds County	100,000
Charlton Lake, Leeds County	60,000
Goold Lake, Frontenac County	40,000
Total Fry	500,000

LAKE TROUT FINGERLINGS.

Sharbot Lake, Frontenac County	30,000
Burritt's Rapids, Grenville County	20,000
Total Fingerlings	50,000

Bass Fingerlings	900,000
Parent Bass	450
Brook Trout Fry	30,000
Brook Trout Fingerlings	90,000
Lake Trout Fry	500,000
Lake Trout Fingerlings	50,000
Grand Total	1,570,450

J. T. EDWARDS.

WATERS STOCKED FROM 1901 TO 1916, WITH NUMBER AND KINDS OF FISH PLANTED IN EACH.—Continued.

1916.

Waters Stocked and Location.	Species.	Number.
Cameron Lake, Peterborough County	Bass Fingerlings	70,000
Balsom Lake " "	" "	80,000
Brown Lake " "	" "	25,000
Moria Lake " "	" "	30,000
Simcoe Lake, County of York	" "	200,000
Bass Lake, Simcoe County, North	" "	25,000
Fox Lake, Parry Sound District	" "	5,000
Dalhousie Lake, Lanark County	" "	10,000
Mississippi Lake " "	" "	70,000
Gull Lake, Frontenac County	" "	30,000
Clear Lake " "	" "	30,000
Sharbot Lake " "	" "	75,000
Cole's Lake " "	" "	30,000
Burritt's Rapids, Grenville County	" "	30,000
Stoco Lake, Hastings County	" "	30,000
Riley's Lake, Muskoka District	" "	25,000
Muskoka Lake " "	" "	50,000
Joseph Lake " "	" "	50,000
Clear Lake, Renfrew County, South	" "	20,000
Cache Lake, Algonquin Park	" "	15,000
Waters vicinity of Simcoe, Norfolk County	Trout Brook Fry	30,000
Mad River, Simcoe County South	" " Fingerlings	25,000
Pine River " " "	" " "	40,000
Sauble River, Grey County	" " "	25,000
Cache Lake, Algonquin Park	Parent Bass	150
Neeth River, Brant County	" "	300
Smoke Lake, Algonquin Park	Trout Lake Fry	80,000
Cache Lake " "	" " "	120,000
Lake of Bays, Muskoka District	" " "	100,000
Rideau Lakes, Leeds County	" " "	100,000
Charlston Lake " "	" " "	60,000
Goold Lake, Frontenac County	" " "	40,000
Sharbot Lake " "	" " Fingerlings	30,000
Burritt's Rapids, Grenville County	" " "	20,000
	Total Bass Fingerlings.	900,000
	" Parent Bass	450
	" Brook Trout Fry.	30,000
	" " " F'gerl'gs	90,000
	" Lake Trout Fry.	500,000
	" " " F'ger'lgs	50,000
	Grand Total	1,570,450

Statement showing the number of fry distributed in the waters of the Province by the Federal Government from Dominion hatcheries.

Years.	Newcastle.	Sandwich.	Ottawa.	Wiarton.	Sarnia.	Total.
1868-73	1,070,000	.....	.....	.....	.....	1,070,000
1874	350,000	.....	.....	.....	.....	350,000
1875	650,000	.....	.....	.....	.....	650,000
1876	700,000	8,000,000	.....	.....	.....	8,700,000
1877	1,300,000	8,000,000	.....	.....	.....	9,300,000
1878	2,605,000	20,000,000	.....	.....	.....	22,605,000
1879	2,602,700	12,000,000	.....	.....	.....	14,603,700
1880	1,923,000	13,500,000	.....	.....	.....	15,423,000
1881	3,300,000	16,000,000	.....	.....	.....	19,300,000
1882	4,841,000	44,000,000	.....	.....	.....	48,841,000
1883	6,053,000	72,000,000	.....	.....	.....	78,053,000
1884	8,800,000	37,000,000	.....	.....	.....	45,800,000
1885	5,700,000	68,000,000	.....	.....	.....	73,700,000
1886	6,451,000	57,000,000	.....	.....	.....	63,451,000
1887	5,130,000	56,500,000	.....	.....	.....	61,630,000
1888	8,076,000	56,000,000	.....	.....	.....	64,076,000
1889	5,846,500	21,000,000	.....	.....	.....	26,846,500
1890	7,736,000	52,000,000	5,732,000	.....	.....	65,468,000
1891	7,807,500	75,000,000	7,043,000	.....	.....	89,850,500
1892	4,823,500	44,500,000	4,909,000	.....	.....	54,232,500
1893	9,835,000	68,000,000	6,208,000	.....	.....	84,043,000
1894	6,000,000	47,000,000	4,480,000	.....	.....	57,480,000
1895	6,000,000	73,000,000	3,210,000	.....	.....	82,210,000
1896	5,200,000	61,000,000	3,950,000	.....	.....	70,150,000
1897	4,200,000	72,000,000	4,100,000	.....	.....	80,300,000
1898	4,325,000	71,000,000	3,020,000	.....	.....	78,345,000
1899	4,050,000	73,000,000	3,700,000	.....	.....	80,750,000
1900	5,175,000	90,000,000	3,450,000	.....	.....	98,625,000
1901	5,900,000	67,000,000	3,410,000	.....	.....	76,310,000
1902	650,000	100,000,000	1,245,000	.....	.....	101,895,000
1903	2,500,000	90,000,000	1,201,000	.....	.....	93,701,000
1904	1,475,000	75,000,000	877,000	.....	.....	77,352,000
1905	1,480,000	106,000,000	1,103,000	.....	.....	108,583,000
1906	1,550,000	88,000,000	1,123,000	.....	.....	90,673,000
1907	1,807,000	103,000,000	1,152,000	.....	.....	105,959,000
1908	2,600,000	79,000,000	2,010,000	4,955,000	51,000,000	139,565,000
1909	1,881,000	66,500,000	1,575,000	8,100,000	159,500,000	237,556,000
1910	1,520,400	76,000,000	1,478,000	12,088,000	74,000,000	165,086,400
1911	1,543,816	77,000,000	.....	12,249,500	113,500,000	204,293,316
1912	1,599,716	29,000,000	.....	12,399,900	77,000,000	119,999,616
1913	2,207,500	59,000,000	.....	8,556,800	94,000,000	.....
1914	.....	65,000,000	.....	6,796,000	120,000,000	.....
1915	.....	63,000,000	.....	8,948,356	72,000,000	.....
Totals...	517,264,632	2,359,000,000	64,976,000	74,093,556	761,000,000	.....

Years.	Collingwood.	Thurlow.	Port Arthur.	Southampton	Kenora.	Total
1913	50,000,000	.....	32,112,950	6,957,000	.....	252,834,250
1914	46,800,000	46,500,000	32,482,700	2,372,000	71,370,000	391,320,700
1915	50,500,000	65,687,000	42,226,000	6,434,750	129,331,200	438,127,306
Grand Totals	146,500,000	112,187,000	106,821,650	15,763,750	200,701,200	3,999,107,788

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, the industry during the year 1915, in the Public

Number.	District.	Fishing material.											
		Tugs.				Gasoline Launches.			Sail or Row Boats.			Gill-Nets.	
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Value.	Men.	Yards.	Value.
	Kenora and Rainy River.			$			$			$			$
1	Lake of the Woods	4	90	6 650	4	27	9,685	49	24	1,221	38	45,000	5,340
2	Crow, Oneman, Sandy and Lawrence Lakes	....	....	....	....	7	1,950	13	5	345	8	14,000	1 290
3	Lac Suele, Elephant, Abraham, Otter, Minnitakie, and Clay Lakes	....	....	....	....	3	650	4	5	330	7	9 600	981
4	Hilley, Vermilion, Eagle, Indian and Isabester Lakes	....	....	....	....	....	....	....	1	50	2	7,900	575
5	Canyon, Manitou, Orang Outang and Wabigoon Lakes	....	....	....	....	1	150	2	1	20	2	8,500	650
6	Deer, Gull and Trout Lakes	....	....	....	....	1	100	2	2	90	4	2,800	275
7	Rainy Lake	....	....	....	....	24	7,855	47	18	360	31	36,400	3,540
8	Height of Land, Loon, Pipestone, Clearwater and Tuttle Lakes	....	....	....	....	1	150	7	4	120	8	10.800	1.125
9	Namaken, Pickerel, Jackfish, and Calm Lakes	....	....	....	....	3	865	7	7	120	12	4.400	285
	Totals	4	90	6,650	4	67	21,405	131	67	2,656	112	139.400	14,061

Return of the kinds, quantities and values of fish caught during the

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel or Dore.
	Kenora and Rainy River.	brls.	lbs.	brls.	lbs.	brls.	lbs	lbs.	lbs.
1	Lake of the Woods	....	....	....	572,033	....	34,196	759,851	857,107
2	Crow, Oneman, Sandy and Lawrence Lakes	....	....	....	137,297	....	17 942	80,603	120,401
3	Lac Suele, Elephant, Abraham, Otter, Minnitakie and Clay Lakes	....	....	....	41 204	....	8,332	23,463	18,874
4	Hilley, Vermilion, Eagle, Indian and Isabester Lakes	....	....	....	20,511	....	10,615	11,992	8,761
5	Canyon, Manitou, Orang Outang and Wabigoon Lakes	....	....	....	13,290	....	8,840	81 080	700
6	Deer, Gull and Trout Lakes	....	....	....	5,880	....	1,900	11,850	3,440
7	Rainy Lake	....	....	....	513,438	....	4,578	217,202	106,192
8	Height of Land, Loon, Pipestone, Clearwater and Tuttle Lakes	....	....	....	9,250	....	4,800	10,582	6,688
9	Namaken, Pickerel, Jackfish and Calm Lakes	....	....	....	36,691	....	1.550	25,319	41.572
	Totals	....	....	....	1,349,624	....	92,753	1,221,942	1,163,735
	Values	....	....	....	$ c. 134,962 40	$ c.	$ c. 9,275 30	$ c. 97,755 36	$ c. 116,373 50

FISHERIES.

Quantity and value of all fishing materials and other fixtures employed in the fishing Waters of Kenora and Rainy River District.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip or roll nets.		Night lines.		Spears.		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
....	.....	.....	32	10,550	4	160	....	.....	.....	.....	....	.....	10	7,250	11	2,170
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	5	1,050	5	300
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	4	500	3	325
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	1	150	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	1	400	1	50
....	.....	.....	.....	.....	2	100	....	.....	.....	.....	....	.....	.....	.....	.....	.....
...	....	..	8	2,100	....	.....	....	.....	.....	.....	....	.....	11	1,630	1	100
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	2	200	.....	.....
....	.....	.....	5	1,000	....	.....	....	.....	.....	.....	....	.....	3	250	.....	.....
....	.....	.....	45	13,650	6	260	....	.....	.....	.....	....	.....	37	11,430	21	2,945

year 1915, in the Public Waters of Kenora and Rainy River Districts.

Sturgeon.	Eels.	Pickerel.	Tullibee.	Catfish.	Carp.	Mixed and coarse fish.	Caviare.	Sturgeon Bladders.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	$ c.
62,310	18,974	6,810	169,061	109,024	188,320	1,340	1,211	121	243,731 38
.....	10,580	.....	28,200	.....	2,000	9,000	.....	.....	36,829 04
.....	.....	.....	100	.....	.....	1,900	.....	.....	8,819 04
.....	.....	.....	5,733	750	.....	3,300	.....	.....	5,520 04
.....	.....	500	21,000	2,000	.....	1,500	.....	.....	10,289 40
.....	.....	.....	.....	6,856	.....	800	.....	.....	2,658 48
1,879	....	635	30,478	.....	.....	55,575	171	....	85,338 99
.....	....	.....	600	.....	.....	4,000	60		3,216 36
18,450	.....	.....	6,935	.....	.....	4,065	258	.....	13,651 67
85,639	59,554	7,975	362,110	118,630	190,320	81 480	1,700	121	410,054 40
$ c. 12,845 85	$ c. 3,573 24	$ c. 398 75	$ c. 15,726 60	$ c. 9,490 40	$ c. 3,806 40	$ c. 4,074 00	$ c. 1,700 00	$ c. 72 60	$ c. 410,054 40

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, fishing industry during the year 1915,

Number.	District.	Fishing Material.											
		Tugs.				Gasolene Launches			Sail or Row Boats.			Gill-Nets.	
		No.	Tonnage.	Value.	Men.	No.	Value.	Men	No.	Value.	Men.	Yards.	Value.
	Lake Superior.			$			$			$			$
1	Thunder Bay	5	101	14,600	32	....	.....	.....	14	845	24	185,240	12,390
2	Rossport	10	78	16,750	35	2	550	2	9	640	12	231,200	11,580
3	Black Bay, Pie Island, Moberley Bay and Whitefish Lake	2	28	5,500	22	1	150	2	3	150	4	23,000	1,264
4	Greenwater Lake, Kashabowie Lake, Dog Lake, Long Lake and Arrow Lakes	....	.....	.....	.....	1	175	2	5	240	9	8,200	706
5	Perley Island, Bell Lake, Port Coldwell, Lamb Island and North Lake	....	.....	.....	.....	....	.....	....	5	325	8	15,000	955
6	McKay Lake, Pine Point, Trout Bay, Lac Des Milles, Lac and T. Harbour	....	.....	.....	.....	2	650	3	6	215	9	18,190	900
7	Marcel Bay, Shebandown Lake, South Island, Pays Plat and Carpenter's Beach	....	.....	.....	.....	....	.....	.....	8	180	8	9,550	535
8	Dampiers Bay and Cloud Bay	....	.....	.....	.....	....	.....	.....	3	95	3	6,100	330
9	Goulais Bay	....	.....	.....	.....	1	1,200	6	15	1,565	30	58,800	3,225
10	Batchawana Bay, Pilot Harbour and Gargantau	1	23	5 000	9	1	600	4	14	1.670	25	102,100	5,445
11	Michipicoten, Richardson's Harbour	2	87	15,000	20	3	1,300	6	6	320	8	159,350	7,545
12	Gros Cap, Mamainse Point	....	.....	.....	.....	4	1,625	10	11	835	20	75,400	4,600
13	Harmony Bay, Parisian Islands, Sandy Island and Red Rock	....	.....	.....	.....	2	1,400	6	5	230	9	24.270	1,960
	Totals	20	317	56,850	118	17	7,650	41	104	7,310	169	916,310	51,935

Return of the kinds, quantities and values of fish caught

Number.	District	Herring, salted.	Herring, fresh.	Whitefish, salted	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel, or Dore.
	Lake Superior.	brls.	lbs	brls.	lbs.	brls	lbs.	lbs.	lbs.
1	Thunder Bay	807	1,282 200	165	49,550	621	216,311	215	925
2	Rossport	1,999	1,040,000	.....	113,300	70	628,327	500	28,300
3	Black Bay, Pie Island, Moberley Bay and Whitefish Lake	.....	430,000	500	194,907	1	38 347	18,652	77,370
4	Greenwater Lake, Kashabowie Lake, Dog Lake, Long Lake and Arrow Lakes	.....	.....	.....	24,797	.....	14,688	2,529	1 500
5	Perley Island, Bell Lake, Port Coldwell, Lamb Island and North Lake	.....	.....	.....	7,064	3	59,776	1,300	5,000
6	McKay Lake, Pine Point, Trout Bay, Lac Des Milles, Lac and T. Harbour	337½	5,000	1	10,175	2	19,700	45,930	49 335
7	Marcel Bay, Shebandown Lake, South Island, Pays Plat and Carpenter's Beach	90	10,000	.....	7,636	1,007	15,893	1,320	.....
8	Dampiers Bay and Cloud Bay	.....	2,800	.....	510	.....	5,567	.....	100
9	Goulais Bay	.....	1,600	.....	86,600	.....	51 200	.....	3,500
10	Batchawana Bay, Pilot Harbour Gargantau	.....	200	2	173,670	1,370	167,710	430	13 931
11	Michipicoten, Richardson's Harbour	.....	.....	18	41,566	6,787	276,952	.....	.....
12	Gros Cap, Mamainse Point	.....	5,100	4	122,678	35½	125,395	.....	.....
13	Harmony Bay, Parisian Islands, Sandy Island and Red Rock	.....	.....	.....	18,527	.....	25,142	.....	.....
	Totals	2,234½	2,776,900	690	841,980	9,896½	1,645,278	70,876	179,961
	Values	$ c. 22,345 00	$ c. 138,845 00	$ c. 6,900 00	$ c. 84,198 00	$ c. 98,965 00	$ c. 164,527 80	$ c. 5,670·08	$ c. 17,996 10

FISHERIES.

the quantity and value of all fishing materials and other fixtures employed in the in the Public Waters of Lake Superior

Fishing Material.														Other fixtures used in fishing.			
Seines.			Pound Nets.		Hoop Nets.		Dip or Roll Nets.		Night Lines		Spears.			Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value	No.	Value.	No.	Value.	No. Hoops.	Value.	No.	Value.		No.	Value.	No.	Value.
				$											$		$
			6	1,100										3	150	4	350
			18	3,400										5	950	7	750
			15	3,675										2	600		
														6	1,050	5	325
														1	100	1	50
														1	25	3	155
														1	200	1	50
			6	3,000										3	900	3	500
			12	6,000										3	3,000	2	1,000
														1	500	4	1,000
			57	17,175										26	7,475	30	4,180

during the year 1915, in the Public Waters of Lake Superior.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Carp.	Mixed and coarse fish.	Caviare	Sturgeon bladders.	Value.
lbs.	lbs	lbs	lbs.	lbs.	lbs.	lbs.	lbs.	No.	$ c.
						227			105,847 15
150					1,400	2,000			139,883 20
9,678						200	16		60,542 26
			900			1,500			4,429 82
									7,318 00
			300						15,268 40
									13 928 50
									757 70
2,110						8,000			14 926 50
4,110		300	1,850			25,080			51,292 00
			5,025			119,411			106,173 85
			839						25,507 64
						650			4 426 40
16,048		300	8,914		1,400	157,068	16		550,301 42
$ c. 2,407 20		$ c. 15 00	$ c. 534 84	$ c.	28 00	$ c. 7,853 40	16 00		$ c. 550,301 42

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, fishing industry during the year 1915, in the

Number.	District.	Fishing material.										
		Tugs.				Gasoline Launches.			Sail or Row Boats.			Gill-Nets.
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Value.	Men.	Yards.	Value
	Lake Huron, North Channel.			$			$			$			$
1	Thessalon					1	1,900	2	8	310	9	23,500	1,430
2	Cutler Bay, Buswell's Point, Burnt Island, and Algoma Mills	2	51	11,000	[illegible]	4	1,950	4	5	205	3	14,600	920
3	Spanish	1	[illegible]	800	2	2	1,000	4	10	370	10	28,100	1,630
4	Sprague, Blind River, John's and Cedar Islands					1	300	2	7	245	11	17,600	990
5	Bruce Mines, Nesterville, Chibleau Lake and St. Joseph's Island								7	190	6	7,500	400
6	Grant Island, Kesel Lake, Brimon Harbour, French Island and Echo Bay					1	400	2	3	100	3	2,500	595
7	Flat Point, Patrick Point and Joliette Island					3	1,800	9	2	150			
8	Mudge Bay and Killarney					7	2,110	16	9	690	18	63,800	2,675
9	Fitzwilliam Island, Sheguandah Bay and Bayfield Sound	1	16	3,000	5	4	2,250	11	3	190	7	33,500	2,912
10	Manitowaning Bay, Providence and Gore Bays	2	21	2,500	8	1	500	3	5	205	7	2,300	110
11	Meldrum, Partrage, Julia and Wekwemikong Bays					1	500	3	3	130	4	62,200	2,147
12	Little Current, Mississauga Straits and Tamarack Cove	1	98	19,000	17	2	375	4	1	50	2	102,300	7,100
13	Heywood, Bedford, Strawberry and Cockburn Islands					4	1,095	8	8	400	14	51,500	2,710
14	South Bay, Squaw Island and Kagawong	9	172	28,100	41	1	500	2	6	465	12	403,900	33,805
15	Rouse and Duck Islands	1	24	7,000	6	5	2,675	13	1	30	1	108,400	11,130
16	Rabbit, Centre Islands and Graundine Point					3	1,300	7	1	35	2	6,500	565
	Totals	26	391	71,400	91	43	18,955	97	79	3,765	109	1,022,700	69,119

Return of the kinds, quantities and values of fish caught during

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel, or Doré.
	Lake Huron, North Channel.	brls.	lbs.	brls	lbs.	brls.	lbs.	lbs.	lbs.
1	Thessalon		600		36,178	1	27,991	2,831	3,320
2	Cutler Bay, Buswell's Point, Burnt Island and Algoma Mills	34	26,060		7,222		17,246	7,699	138,434
3	Spanish	92	10,257		3,765	11	10,815	17,526	30,256
4	Sprague, Blind River, John's and Cedar Islands	12	648		3,616	2	5,185	7,783	388
5	Bruce Mines, Nesterville, Chibleau Lake and St. Joseph's Island				7,590	1	12,352	7,996	2,584
6	Grant Island, Kesel Lake, Brimon Harbour, French Island and Echo Bay		320		6,101		6,272	99	461
7	Flat Point, Patrick Point and Joliette Island		1,000		23,263		29,258	2,740	47,167
8	Mudge Bay and Killarney			10	128,133		41,433	12,988	20,110
9	Fitzwilliam Island, Sheguandah Bay and Bayfield Sound				34,491	36	92,326	5,933	2,369
10	Manitowaning Bay, Providence and Gore Bays				36,062	6	161,458	8,819	16,054
11	Meldrum, Partrage, Julia and Wekwemikong Bays				39,284		86,295		200
12	Little Current, Mississauga Straits and Tamarack Cove			2	25,890	4	191,851	5,748	39,415
13	Heywood, Bedford, Strawberry and Cockburn Islands			1	14,881	8	62,334	12,528	11,446
14	South Bay, Squaw Island and Kagawong		486	90	259,340	110	509,490	4,474	2,564
15	Rouse and Duck Islands				740		463,696	1,500	
16	Rabbit, Centre Islands and Graundine Point				19,903		7,240	7,110	17,884
	Totals	138	39,380	103	656,459	179	1,725,232	101,836	332,602
	Values	$ c. 1,380 00	$ c. 1,969 00	$ c. 1,030 00	$ c. 65,645 90	$ c. 1,790 00	$ c. 172,523 20	$ c. 8,146 88	$ c. 33,260 20

FISHERIES

the quantity and value of all fishing materials and other fixtures employed in the Public Waters of Lake Huron, North Channel.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip or roll nets.		Night lines.		Spears.		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
....	.....	.....	4	1,000	....	.....	....	.....	.....	.....	.....	.....	3	100	1	100
....	.....	.....	12	3,300	....	.....	....	.....	.....	.....	.....	.....	6	1,700	4	2,500
....	.....	.....	6	1,200	....	.....	....	.....	.....	.....	.....	.....	5	575	1	100
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	.....	.....	3	225	....	.....
....	.....	.....	3	600	....	.....	....	.....	.....	.....	.....	.....	1	100	1	100
....	.....	.....	4	1,000	1	20	....	.....	.....	.....	.....	.....	1	250	1	250
....	.....	.....	20	7,400	....	.....	....	.....	.....	.....	.....	.....	3	1,000	3	1,600
....	.....	.....	5	4,000	....	.....	....	.....	.....	.....	.....	.....	1	300	1	1,500
....	.....	.....	13	4,500	....	.....	....	.....	3,900	150	....	.....	2	1,000	2	1,200
....	.....	.....	18	6,000	....	.....	....	.....	.....	.....	.....	.....	3	700	3	1,800
....	.....	.....	5	2,000	....	.....	....	.....	.....	.....	.....	.....	3	1,200	3	2,000
....	.....	.....	13	5,800	....	.....	....	.....	.....	.....	.....	.....	3	600	3	1,550
....	.....	.....	3	900	....	.....	....	.....	.....	.....	.....	.....	1	100	....	.....
....	.....	.....	8	6,000	....	.....	....	.....	.....	.....	.....	.....	8	5,400	6	1,200
....	.....	.....	8	5,000	....	.....	....	.....	.....	.....	.....	.....	1	500	2	500
....	.....	.....	8	3,300	....	.....	....	.....	.....	.....	.....	.....	....	.....	....	.....
....	.....	.....	130	52,000	1	20	....	.....	3,900	150	....	.....	44	14,050	31	15,500

the year 1915, in the Public Waters of Lake Huron, North Channel.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Carp.	Mixed and Coarse fish.	Caviare.	Sturgeon Bladders.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	$ c.
411	.....	464	.....	.....	.....	20,902	.....	.....	3,245 53
6,410	.....	514	.....	.....	.....	53,037	7	248	22,343 70
1,328	.....	550	3,383	.....	.....	34,325	6	.....	9,580 46
61	.....	1,082	.....	.....	.....	4,663	4	.....	2,014 24
.....	.....	642	.....	.....	.....	33,273	.....	.....	3,888 83
161	.....	100	.....	.....	.....	22,334	.....	.....	2,250 05
12,412	.....	.....	.....	292	.....	68,985	150	.....	16,722 41
222	.....	2,646	.....	1,050	5	1,857	260	.....	20,709 19
91	.....	570	.....	.....	.....	15,102	.....	.....	14,478 49
1,310	.....	35	4,986	27	.....	40,547	.....	.....	21,649 84
185	.....	190	.....	.....	.....	.....	.....	.....	12,015 15
2,221	.....	500	.....	.....	.....	75,224	.....	.....	30,354 79
1,139	.....	.....	.....	.....	.....	33,685	.....	.....	11,812 44
25	.....	8,664	4,025	.....	.....	18,611	.....	.....	81,136 62
400	.....	191	40,000	.....	.....	2,756	.....	.....	49,176 95
1,099	.....	35	.....	27	.....	10,217	.....	.....	5,746 11
4 27,475	.....	16,183	52,394	1,396	5	425,518	427	248	315,782 70
$ c.		$ c.	$ c.	$ c.	c.	$ c.	$ c.	$ c.	$ c.
4,121 25	.....	809 15	3,143 64	111 68	10	21,275 90	427 00	148 80	315,782 70

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, the industry during the year 1915,

Number.	District.	Fishing material.											
		Tugs.				Gasoline Launches.			Sail or Row Boats			Gill-Nets.	
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Value.	Men.	Yards.	Value.
	Georgian Bay.			$			$			$			$
1	Byng Inlet	1	25	5,000	5	3	400	7	5	130	6	69,510	7,200
2	Parry Sound	5	119	18,000	22	6	2,000	10	8	675	12	283,600	15,690
3	Waubaushene								25	4,105	33	52,900	4,180
4	Penetanguishene					1	300	2	5	136	11	24,150	1,215
5	Collingwood	1	25	4,000	5	13	3,150	23	4	330	6	112,700	5,140
6	Meaford and Owen Sound Bay	4	113	17,500	16	13	9,150	32	12	590	16	262,040	12,550
7	Colpoy's Bay and Tobermory	1	24	4,000	5	30	12,385	66	34	2,420	67	119,275	6,382
	Totals	12	306	48,500	53	66	27,385	140	93	8,386	151	924,175	52,357

Return of the kinds, quantities and values of fish caught

Number	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh	Pike.	Pickerel or Dore.
	Georgian Bay.	brls.	lbs.	brls.	lbs.	brls	lbs.	lbs.	lbs.
1	Byng Inlet	305	300	300	108,867	.....	29,752	38,417	57,366
2	Parry Sound	.....	.....	2	215,916	8	251,041	5,410	8,261
3	Waubaushene	5	.....	816	4,800	277	2,100	33,900	19,500
4	Penetangnishene	27	1,975	14	5,680	74	15,850	256	149
5	Collingwood	.....	19,500	.....	22,335	.....	82,362	.....	.....
6	Meaford and Owen Sound Bay	.....	11,800	.....	27,400	425	433,532	.....	.....
8	Colpoy's Bay and Tobermory	124	65,494	204	7,427	2 878	573,652	400	102
	Totals	461	99,069	1,330	392,425	3,662	1,388,289	75,383	85,378
	Values	$ c. 4,610 00	$ c. 4,953 45	$ c. 13,300 00	$ c. 39,242 50	$ c. 36,620 00	$ c. 138,898 90	$ c. 6,270 64	$ c. 8,537 80

FISHERIES.

quantity and value of all fishing materials and other fixtures employed in the fishing in the Public Waters of the Georgian Bay.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound Nets.		Hoop nets.		Dip or Roll Nets.		Night Lines.		Spears		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
....	.....	.....	8	2,700	....	.....	....	.....	.....	.....	....	.....	.....	.....	.....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	7	1,950	6	975
1	100	90	....	.....	25	483	....	.....	.....	.....	....	.....	....	.....	1	100
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	2	75	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	....	.....	.....	.....
....	.....	.....	....	.....	....	.....	....	.....	7,800	560	....	.....	7	3,100	5	900
....	.....	.....	1	350	....	.....	....	.....	20,800	1,940	....	.....	6	560	11	925
1	100	90	9	3,050	25	483	....	.....	28,600	2,500	....	.....	22	5,685	23	2,900

during the year 1915 in the Public Waters of the Georgian Bay.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Carp.	Mixed and coarse fish.	Caviare.	Sturgeon Bladders	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	c	$
1,685	.....	2,107	.....	.....	.....	5,200	100	.....	29,454 96
.....	.....	.....	.....	.....	1,700	.....	.....	.....	48,088 60
.....	.....	6,910	.....	8,675	13,250	37,504	30	.....	19,481 70
43	.....	.....	1,050	.....	.....	.....	.....	.....	3,506 58
4,400	.....	2,000	.....	.....	600	2,100	775	.....	13,096 70
.....	.....	.....	.....	.....	.....	.....	.....	.....	50,933 20
.....	.....	.....	41,964	.....	.....	700	.....	.....	96,037 64
6,128	.....	11,017	43,014	8,675	15,550	45,504	905	.....	260,599 38
$ c. 919 20	.....	$ c. 550 85	$ c. 2,580 84	$ c. 694 00	$ c. 311 00	$ c. 2,275 20	$ c. 905 00	$ c.	$ c. 260,599 38

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, fishing industry during the year 1915.

Number.	District.	Fishing material.											
		Tugs.				Gasoline Launches.			Sail or Row Boats.			Gill-Nets.	
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Value.	Men.	Yards.	Value.
	Lake Huron (Proper).			$			$			$			$
1	Tobermory to Southampton	8	155	22,900	41	7	2,350	18	28	2,640	52	296,871	25,603
2	Southampton to Pine Point	1	21	3,000	6	2	750	4	2	90	4	30,000	2,410
3	County of Huron	1	5	2,000	....	9	4,850	21	8	1,085	18	91,600	5,580
4	County of Lambton (including River St. Clair)	2	2	600	.....	17	6,215	37	37	3,003	56	.....	.....
	Totals	12	183	28,500	47	35	14,165	70	75	6,818	130	408,471	33,593

Returns of the kinds, quantities and values of fish caught

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted	Trout, fresh.	Pike.	Pickerel, or Dore.
	Lake Huron (Proper).	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Tobermory to Southampton	398	20,350	25	7,585	447	483,629	.....	21
2	Southampton to Pine Point	3	10,300	.....	900	.....	122,050	150	.....
3	County of Huron	....	19,210	.....	10,910	40	167,083	.....	19,668
4	County of Lambton (including River St. Clair)	4	163,011	.....	32,464	500	14,855	59	148,294
	Totals	405	221,871	25	51,859	987	787,617	209	167,983
	Values	$ c. 4 050 00	$ c. 11,093 55	$ c. 250 00	$ c. 5,185 90	$ c. 9,870 00	$ c. 78,761 70	$ c. 16 72	$ c. 16,798 30

FISHERIES.

the quantity and value of all fishing materials and other fixtures employed in the in the Public Waters of Lake Huron (Proper).

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip or Roll Nets.		Night Lines.		Spears.		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
....	....		2	300	....	.....	5,200	215	....				5	2,550	1	25
....	....		....	....	....	....	....	.... ..	... .				2	250	.....	....
....	....		8	2,250	....	....	.....	....	... .				10	1,155	3	150
6	375	430	54	15,750	....	....	.....	.....	.....		....		25	800	2	1,100
6	375	430	64	18,300	....	9	31	5,200	215	....			42	4,755	6	1,275

during the year 1915, in the Public Waters of Lake Huron (Proper).

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Carp.	Mixed and coarse fish.	Caviare.	Sturgeon bladders.	Value.
lbs.	lbs.	lbs.	lbs.	lbs	lbs.	lbs.	lbs.	No.	$ c.
44	....	8,900	263,306	.....	5	2,000	....	....	55,641 06
.....	....	1,900	....	....	200	....	....	.....	12,951 00
1,645	.....	142,810	6,543	....	.....	25,487	70	....	30,250 48
10,917	....	8,048	....	16	10,809	53,330	912	13	28,600 28
12,606	....	161,658	269,849	16	11 014	80,817	982	13	157,443 12
$ c. 1,830 90	$ c.	$ c. 8,082 90	$ c. 16,190 94	$ c. 1 28	$ c. 220 28	$ c. 4,040 85	$ c. 982 00	$ c. 7 80	$ c. 157,443 12

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, fishing industry during the year 1915,

Number.	District.	Fishing material.											
		Tugs.				Gasoline Launches.			Sail or Row Boats.			Gill-Nets.	
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Value.	Men.	Yards.	Value.
	Lake St. Clair.						$			$			$
1	Kent County (including River Thames)					23	6,500	36	26	1,290	32		
2	Essex County					30	7,100	56	57	2,065	68		
3	Detroit River					2	3,300	6	37	1,137	97		
	Totals					55	16,900	98	120	4,492	197		

Return of the kinds, quantities and values of fish caught

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel or Dore.
	Lake St. Clair.	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Kent County (including River Thames)							29,733	16,524
2	Essex County			200	22,200			14,550	18,175
3	Detroit River				21,500			10,360	2,690
	Totals			200	43,700			54,643	37,389
	Values			$ c. 2,000 00	$ c. 4,370 00			$ c. 4,371 44	$ c. 3,738 90

FISHERIES.

the quantity and value of all fishing materials and other fixtures employed in the
in the Public Waters of Lake St. Clair.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip or Roll Nets.		Night Lines.		Spears.		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
13	3,900	1,285	....	.....	101	5,575	6	128	800	550	....	.....	16	3,695	8	1,600
19	3,850	1,180	10	2,600	68	3,505	....	.....	2,500	188	....	.....	18	6,200	....	.....
38	4,551	2,059	....	.....	....	.....	....	.....	.....	.....	....	.....	....	.....	3	83
70	12,301	4,524	10	2,600	169	9,080	6	128	3,300	738	.....	.....	34	9,895	11	1,683

during the year 1915, in the Public Waters of Lake St. Clair.

Sturgeon.	Eels	Perch.	Tullibee.	Catfish.	Carp.	Mixed and coarse fish.	Caviare.	Sturgeon bladders.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	$ c.
4,565	.....	60,178	.....	36,808	205,170	178,276	.....	.....	23,686 53
29,400	.....	48,485	.....	29,220	201,230	181,550	1,067	.....	30,542 45
150	.....	3,953	....	240	257,170	23,795	....	.....	9,820 30
34,115	....	112,616	.....	66,268	663,570	383,621	1,067	....	64,049 28
$ c.	$ c.	$ c.		$ c.	$ c.	$ c.	$ c.		$ c.
5,117 25	....	5,630 80	.....	5,301 44	13,271 40	19,181 05	1,067 00	.....	64,049 28

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, the fishing industry during the year 1915,

Number.	District.	Fishing material.											
		Tugs				Gasoline Launches.			Sail or Row Boats.			Gill-Nets.	
		No.	Tonnage.	Value	Men.	No.	Value	Men.	No.	Value.	Men.	Yards.	Value.
	Lake Erie.			$			$			$			$ c.
1	Pelee Island	4	133	24,000	28	9	3,750	35	15	547	21	92,700	8,714 00
2	Essex County	1	37	5,000	4	48	26,460	103	24	3,845	18	23,000	2,300 00
3	Kent County, West	3	61	1,300	14	29	12,650	63	8	475	2	120,000	6,000 00
4	Kent County, East					24	9,250	77	1	20			
5	Elgin County, West	2	23	17,000	12	17	7,400	57	6	290	2	107,172	7,190 00
6	Elgin County, East	20	668	140,550	100	11	9,550	28	4	850	6	729,800	67,050 00
7	Norfolk County	10	234	62,000	67	8	4,100	31	80	3,240	191	244,800	17,453 00
8	Haldimand County (to and including the Grand River)	11	275	60,900	50	17	8,500	51	25	430	27	189,420	31,127 00
9	Port Maitland to Port Colborne								10	290	11		
10	Port Colborne to Niagara Falls					3	800	4	13	518	15	19,750	1,368 60
	Totals	50	1,431	310,750	275	166	82,160	449	186	10,505	293	1,526,642	141,202 60

Return of the kinds, quantities and values of fish caught

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel, or Dore.
	Lake Erie.	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Pelee Island		288,841		150,062			1,627	26,947
2	Essex County		148,465		313,325		11	383,441	126,915
3	Kent County, West		283 084		154,488				100 031
4	Kent County, East		162,036		41,905			23,898	51,983
5	Elgin County, West		245,724		104,571			36,013	139,900
6	Elgin County, East		1,785,090		612,748		15	11,025	6,828
7	Norfolk County		1,180,409		248,355		1,484	115,757	95,281
8	Haldimand County (to and including the Grand River)		1,478,627		306,399		873	45,416	52,670
9	Port Maitland to Port Colborne							45	6,500
10	Port Colborne to Niagara Falls		1,412		390			13,228	655
	Totals		5,573,088		1,832,243		2,383	630,450	607,710
	Values		$ c. 278,684.40		$ c. 183,224.30		$ c. 238.30	$ c. 50,436.00	$ c. 60,771.00

FISHERIES.

quantity and value of all fishing materials and other fixtures employed in the in the Public Waters of Lake Erie.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound Nets.		Hoop Nets.		Dip or Roll Nets.		Night Lines.		Spears.		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
3	800	185	50	8,850	....	....	....	....	925	25	....	....	1	1,250	2	5,000
7	1,400	530	191	80,650	....	....	....	....	....	....	....	....	23	10,025	3	225
1	75	35	101	57,900	....	....	....	....	....	....	....	....	22	35,000	10	3,100
5	2,000	525	79	35,700	....	....	....	....	....	....	....	....	19	9,100	5	250
....	....	....	91	39,350	....	....	....	....	....	....	....	....	8	4,150	8	10,100
....	....	....	23	8,800	....	....	2	11	....	....	....	....	11	7,600	5	3,860
44	16,400	6,525	23	6,900	....	....	....	....	1,200	25	....	....	21	10,670	12	1,375
4	295	210	49	17,500	....	....	9	60	....	....	....	....	18	3,765	11	1,300
....	....	....	....	....	....	....	....	....	4,610	49.50	....	....	....	....	....	....
1	35	20	....	....	....	....	....	....	2,500	31.25	....	....	....	....	....	....
65	21,005	8,030	607	255,650	....	....	11	71	9,235	130.75	....	....	123	80 960	56	25 150

during the year 1915, in the Public Waters of Lake Erie.

Sturgeon.	Eels.	Perch.	Pulliber.	Catfish.	Carp.	Mixed and coarse fish.	Caviare.	Sturgeon Bladders.	Pickerel (Blue).	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	lbs.	$ c.
7,934	....	174,843	....	2,592	58,196	91,258	260	....	305,193	78,918 84
7,778	....	137,126	1 240	8,805	195,100	353,254	981½	622	395,640	153,408 83
2,021	....	185,162	....	....	1,320	88,822	32	....	845,901	138,256 95
1,812	....	133,277	....	2,465	271,099	84,121	61½	....	805,187	116,743 52
1,382	.. ....	75,305	....	2,199	162	44,362	101	456	380,645	84,423 25
1,088	....	102,868	....	7,638	90	66,958	47½	....	1,265,354	287,945 84
4,120	....	175,749	19,860	13,737	335,553	136,661	158	....	393,827	167,573 83
20,860	....	54,017	....	1,000	43,230	57,711	560	117	404,002	154,249 23
1,990	....	....	....	....	....	5,500	92	....	82,933	9,612 40
7,330	....	3,744	....	....	130	19,911	567¾	24	3,630	4,463 34
56,315	....	1,042,091	21,100	38,436	904,880	948,558	2,861½	1,219	4,882,312	1,195,596 03
$ c. 8,447.25	....	$ c. 52,104.55	$ c. 1,266.00	$ c. 3,074.88	$ c. 18,097.60	$ c. 47,427.90	$ c. 2,861.25	73 1.40	$ c. 488,231.20	$ c. 1,195,596 03

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, fishing industry during the year 1915,

Number.	District.	Fishing material.										
		Tugs				Gasoline Launches.		Sail or Row Boats.			Gill- Nets.	
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Value.	Men.	Yards.	Value.
	Lake Ontario.			$			$			$			$ c.
1	Lincoln County					18	6,310	35	7	230	7	97,325	5,991 00
2	Wentworth County					7	2,225	16	18	497	27	52,100	5,100 00
3	Halton County					17	4,950	34	2	175	4	95,800	4,700 00
4	Peel County					3	1,300	5				1,400	1,750 00
5	York County					7	2,930	14	2	100	4	34,200	2,812 50
6	Ontario County					2	550	4	4	90	6	8,400	890 00
7	Durham County					1	250	2	5	90	5	3,440	66 00
8	Northumberland County					10	3,100	19	28	1,095	43	65,695	3,640 00
9	Prince Edward County					56	14,875	106	111	3,772	180	314,325	13,871 50
10	Bay of Quinte (Proper)					4	640	6	165	5,608	252	74,400	4,324 50
11	Bay of Quinte (Eastern Channel)					20	3,910	35	57	1,466	73	106,100	4,850 00
12	Wolfe Island and Vicinity					12	3,430	31	35	1,430	56	34,500	1,425 00
	Totals					157	44,470	307	434	14,653	657	887,685	49,420 50

Return of the kinds, quantities and values of fish caught

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel or Dore.
	Lake Ontario.	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Lincoln County	10	625,857		30,800		7,300		52,361
2	Wentworth County		376,500		30,740		3,070	67,240	1,360
3	Halton County		216,250		16,800		26,000		
4	Peel County	7	85,000		7,000		17,450		
5	York County		25,662		28,635		12,500	100	10
6	Ontario County		817		15,300		1,200	253	
7	Durham County		2,877		12,000		500		
8	Northumberland County	48½	24,410	1	45,305		56,686	67,902	
9	Prince Edward County	21	127 072	5	305,128	10	289,204	42,213	1,315
10	Bay of Quinte (Proper)	6¾	216,106	29	154,138		650	164,107	27,909
11	Bay of Quinte (Eastern Channel)	2¼	5,900	2	151,572	3	111,409	3,600	1,730
12	Wolfe Island and Vicinity			3	12,300	10	24,800	21,573	1,280
	Totals	95¾	1,706,391	40	809 618	23	550,769	366 988	85,965
	Values	$ c. 957 50	$ c. 85,319 55	$ c. 400 00	$ c. 80,961 80	$ c. 230 00	$ c. 55,076 90	$ c. 29,359 04	$ c. 8,596 50

FISHERIES..

the quantity and value of all fishing materials and other fixtures employed in the in the Public Waters of Lake Ontario.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip or Roll nets.		Night Lines.		Spears.		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
1	83	65	....	.....	....	.....	....	.....	.....	.....	....	.....	1	200	....	.....
5	690	215	....	.....	....	.....	....	.....	1,650	17 50	224	336	226	2,640	1	50
1	200	75	....	.....	....	.....	....	.....	.....	.....	....	.....	19	1,510	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	3	350	1	200
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	....	.....	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	....	.....	....	.....
....	.....	.....	....	.....	1	10	....	.....	.....	.....	....	.....	2	300	....	.....
....	.....	.....	....	.....	51	1,300	....	.....	.....	.....	....	.....	2	75	....	.....
....	.....	.....	....	.....	90	1,835	....	.....	5,650	182 00	....	.....	18	1,665	2	30
1	180	100	....	.....	331	5,800	....	.....	7,300	78 80	....	.....	1	75	....	.....
1	10	10	....	.....	11	245	....	.....	10,500	460 00	....	.....	....	.....	....	.....
10	.....	41	....	.....	82	1,825	....	.....	3,300	75 00	....	.....	4	350	7	675
19	1,163	506	....	.....	566	11,015	....	.....	28,400	813 30	221	336	276	7,065	11	955

during the year 1915. in the Public Waters of Lake Ontario.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Carp.	Mixed and coarse fish.	Caviare.	Sturgeon Bladders.	Herring, Smoked.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	lbs.	$ c.
300	75	4,470	.....	1,000	.....	14,200	.....	.....	.....	41,501 95
.....	3,712	1,775	.....	.....	61,900	6,250	.....	.....	.....	29,583 17
.....	.....	.....	.....	.....	7,000	3,000	.....	.....	75,800	22,962 50
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,765 00
.....	.....	50	.....	.....	.....	2,088	.....	.....	.....	5,509 50
.....	.....	35	.....	.....	.....	590	.....	.....	.....	1,737 84
.....	.....	38	.....	50	100	4,240	.....	.....	.....	1,613 75
.....	21,560	15,100	.....	29,362	11,360	80 355	.....	.....	.....	25,989 27
.....	44,899	6,857	.....	43,413	3,900	96,152	.....	.....	.....	81,050 77
.....	90,659	67,106	.....	150,060	23,283	187,294	.....	.....	.....	73,191 06
75	34,449	1,464	....	3,150	.....	10,900	.....	.....	.....	30,077 49
1,146	24 349	22,415	. .....	40,663	4,975	33,705	.....	.....	.....	13 475 22
1,521	219,703	119,310	.....	267,698	112,518	438,684	.....	.....	75 800	333,457 52
$ c. 928 15	$ c. 13,182 18	$ c. 5,965 50	$ c.	$ c. 21,415 84	$ c. 2,250 36	$ c. 21,934 20	.....	$ c.	$ c. 7,580 00	$ c. 333,457 52

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats fishing industry during the pear 1915,

Number.	District.	Fishing Material.											
		Tugs.				Gasoline Launches.			Sail or Row Boats.			Gill Nets.	
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Value.	Men.	Yards.	Value.
	Inland Waters.			$			$			$			$ c.
1	Frontenac County					6	1,175	6	49	935	63	1,580	127 00
2	Lanark and Leeds Counties					46	12,875	47	85	3,106	129	30	2 50
3	Renfrew, Carleton, Grenville, Prescott and Stormont Counties					4	650	6	88	835	88	1,700	52 00
4	Lake Simcoe					3	2,300	3	14	405	18	.....	.....
5	Nipissing and Timiskaming Districts					1	600	4	9	700	11	6,650	887 00
	Totals					60	17,600	66	245	5,981	309	9,960	1,068 50

Return of the kinds, quantities and values of fish caught

Number	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel or Dore.
	Inland Waters.	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Frontenac County	.....	.....	.....	.....	.....	.....	26,294	.....
2	Lanark and Leeds Counties	.....	.....	.....	600	.....	.....	18,527	.....
3	Renfrew, Carleton, Grenville, Prescott and Stormont Counties	.....	.....	.....	.....	.....	.....	2,352	603
4	Lake Simcoe	.....	521	.....	7,001	.....	31,947	.....	397
5	Nipissing and Timiskaming Districts	.....	1,815	.....	8,110	.....	1,900	11,912	10,045
	Totals	.....	2,336	.....	15,711	.....	33,847	59,085	11,045
	Values	$ c.	$ c. 116 80	$ c.	$ c. 1,571 10	.....	$ c. 3,384 70	$ c. 4,726 80	$ c. 1,104 50

FISHERIES.

the quantity and value of all fishing materials and other fixtures employed in the in the public waters of Inland Waters.

Fishing Material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip or Roll Nets.		Night Lines.		Spears.		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$ c.		$		$ c.		$		$		$
10	115	191	....	.....	75	2,705 00	....	.....	.....	.....	....	.....	2	150	1	25
2	40	45	....	.....	238	4,610 60	....	.....	4,200	118 00	....	.....	2	150	3	225
....	.....	.....	....	.....	13	153 00	8	17	10,785	203 10	....	.....	2	60	....	.....
2	400	300	....	.....	....	.....	....	.....	5,250	97 00	195	751 25	52	1,050	2	200
....	.....	.....	3	375	3	75 00	....	.....	.....	.....	....	.....	4	590	....	.....
14	555	536	3	375	239	7,543 60	8	17	20,235	418 10	195	751 25	62	2,000	6	450

during the year 1915, in the public waters of Inland Waters.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Carp.	Mixed and coarse fish.	Caviare.	Sturgeon Bladders.	Value.
lbs.	lbs.	lbs	lbs.	lbs.	lbs.	lbs.	lbs.	No.	$ c.
.....	16,890	711	.....	85,229	.....	160,620	.....	.....	18,991 79
4,380	13,956	3,988	.....	73,775	300	171,050	.....	.....	17,693 87
5,680	2,385	2,610	.....	4,666	1,903	30,280	22	3	3,323 20
.....	.....	10,136	.....	.....	116,637	63,197	.....	.....	9,959 94
1,575	35	1,725	5,600	2,700	.....	19,859	.....	.....	4,918 76
11,315	33,266	19,170	5,600	166,370	118,840	445,015	22	3	53,897 56
$ c. 1,742 25	$ c. 1,995 96	$ c. 958 50	$ c. 336 00	$ c. 13,309 60	$ c. 2,370 80	$ c. 22,250 75	$ c. 22 00	$ c. 1 80	$ c. 53,897 56

ONTARIO

Recapitulation of the number of fishermen, tonnage and value of tugs, vessels and boats. industry during

Number	District.	Fishing material.											
		Tugs.				Gasoline Launches.			Sail or Row Boats.			Gill-Nets.	
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Value.	Men.	Yards.	Value.
				$			$			$			$ c.
1	Kenora & Rainy River Dist..	4	90	6,650	4	67	21,405	131	67	2,656	172	139,400	14,061 00
2	Lake Superior	20	317	56,850	118	17	7,650	41	104	7,310	169	916,310	51,935 00
3	Lake Huron (North Channel)	20	391	71,400	91	43	18,955	97	79	3,765	109	1,022,700	69,119 00
4	Georgian Bay	12	306	48,500	53	66	27,385	140	93	8,386	151	924,175	52,357 00
5	Lake Huron (Proper)	12	183	28,500	47	35	14,165	70	75	6,818	130	468,471	33,593 00
6	Lake St. Clair, etc	....	....	....	....	55	16,900	98	120	4,492	197	.....	.....
7	Lake Erie	50	1,431	310,750	275	166	82,460	449	186	10,505	293	1,526,642	141,202 60
8	Lake Ontario	....	.....	.....	.....	157	44,470	307	434	14,653	657	887,685	49,420 50
9	Inland Waters	....	.....	.....	.....	60	17 600	66	245	5,981	309	9 960	1 068 50
	Totals	118	2,718	522,650	588	666	250,990	1,399	1403	64,566	2,127	5,895,343	412,756 60

Recapitulation of the kinds, quantities and values

Number	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel or Dore.
		brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Kenora and Rainy River District	.....	.....	.....	1,349,624	....	92,753	1,221,942	1,163,735
2	Lake Superior	2,234½	2,776,900	690	841,980	9,896½	1,645,278	70,876	179,961
3	Lake Huron (North Channel)	138	39,380	103	656,459	179	1,725,232	101,836	332,602
4	Georgian Bay	461	99,069	1,330	392,425	3,662	1,388,289	78,383	85,678
5	Lake Huron (Proper)	405	221 871	25	51,859	987	787 617	209	167,923
6	Lake St. Clair, etc	....	.....	200	43,700	.....	.. ..	54,643	37,389
7	Lake Erie	.....	5,573,688	.....	1,832,243	.....	2,383	630,450	607,710
8	Lake Ontario	55¾	1,701,391	40	809,618	23	550,769	336,988	85,965
9	Inland Waters	.....	2,336	.....	15.711	.....	33 847	59,005	11,045
	Totals	3,334½	10,419,635	2,388	5,993,619	14,747½	6,226,168	2,584,412	2,671,768
	Values	$ c. 33,342 50	$ c. 520,981 75	$ c. 23,880 00	$ c. 599,361 90	$ c. 147,475 00	$ c. 622,616 80	$ c. 206,752 96	$ c. 267,176 80

FISHERIES.

the quantity and value of all fishing material and other fixtures employed in the fishing the year 1915.

Fishing material.—*Continued.*													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip or Roll nets.		Night Lines.		Spears.		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No	Value.	No.	Value.
		$		$		$ c.		$		$ c.		$ c.		$		$
....	.....	.....	45	13,650	6	260 00	....	.....	.....	.....	....	.....	37	11,430	21	2,945
....	.....	.....	57	17,175	....	.....	....	.....	.....	.....	....	.....	26	7,475	30	4,180
....	.....	.....	130	52,000	1	20 00	....	.....	3,900	150 00	....	.....	44	14,050	31	15 300
1	100	90	9	3,050	25	483 00	....	.....	28,600	2,500 00	....	.....	22	5,685	23	2,900
6	370	430	64	18,300	....	....	9	31	5,200	215 00	....	.....	42	4,755	6	1,275
70	12,301	4,524	10	2,600	169	9,080 00	6	128	3,300	738 00	....	.....	34	9,895	11	1,683
65	21,005	8,030	607	255,650	....	.....	11	71	9,235	130 75	....	.....	123	80,960	56	25 150
19	1,163	506	....	....	566	11,015 00	....	.....	28,400	813 30	224	336 00	276	7,065	11	955
14	555	536	3	375	239	7,543 60	8	17	20 235	418 10	195	751 25	62	2,000	6	450
175	35,494	14,116	925	362,800	1006	28,401 60	34	247	98,870	4,965 15	419	1,087 25	666	143,315	195	54,838

of fish caught during the year 1915.

Sturgeon.	Eels	Perch.	Tullibee.	Catfish.	Carp.	Mixed and coarse fish.	Caviare.	Sturgeon Bladders.	Pickerel (Blue)	Herring Smoked.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	$ c.
85,639	59,554	7,975	262,110	118,630	190,320	81,480	1,700	121	....	.....	410,054 40
16,048	.....	300	8,914	....	1,400	157,068	16	.....	.....	.....	550,301 42
27,475	.....	16,183	52,394	1,396	5	425,518	427	248	....	.....	315 782 70
6,128	.....	11,017	43,014	8,675	15,550	45,504	905	.....	....	.....	260,599 38
12,606	....	161,658	269,849	16	11,014	80,817	982	13	... .	.....	157,443 12
34,115	.....	112,616	....	66,218	663,570	383,621	1,067	.....	....	.....	64,049 28
56,315	....	1,042,091	21,100	38,436	904,880	948,858	2,861¾	1,219	4,882,312	.....	1,195,506 03
1,521	219,703	119,310	....	267,698	112,518	438,684	....	.....	....	75,800	333,457 52
11,615	33,266	19,170	5,600	166,370	118,840	445,015	22	3	....	.....	53,897 56
251,462	312,523	1,490,320	662,981	667,489	2,018,097	3,006,265	7,980¾	1,604	4,882,312	75,800	3,341,181 41
$ c.	$ c.	$ c.	$ c.	$ c.	$ 1,	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
27,719 30	18,751 38	74,516 00	39,778 86	53,399 12	40,361 94	150,313 25	7,980 25	962 40	488,231 20	7,580 00	3,341,181 41

Comparative Statement of yield for 1914-15, according to Districts.

		1914.	1915.	Increase.	Decrease.
Kenora and Rainy River District:					
Herring	bbls.				
Herring	lbs.				
Whitefish	bbls.	150			150
Whitefish	lbs.	995,041	1,349,624	354,583	
Trout	bbls.				
Trout	lbs.	161,713	92,753		68,960
Pike	"	760,554	1,221,942	461,388	
Pickerel (Dore)	"	922,968	1,163,735	240,767	
Sturgeon	"	95,804	85,639		10,165
Eels	"		59,554	59,554	
Perch	"	500	7,975	7,475	
Tullibee	"	127,133	262,110	134,977	
Catfish	"	66,420	118,630	52,210	
Carp	"	124,730	190,320	65,590	
Mixed and Coarse fish	"	163,860	81,480		82,380
Caviare	"	1,685	1,700	15	
Sturgeon Bladders	No.	93½	121	27½	
Lake Superior:					
Herring	bbls.	1,915	2,234½	319½	
Herring	lbs.	781,935	2,776,900	1,994,965	
Whitefish	bbls.	313	690	377	
Whitefish	lbs.	337,564	841,980	504,416	
Trout	bbls.	690	9,896½	9,206½	
Trout	lbs.	1,438,842	1,645,278	206,436	
Pike	"	201,287	70,876		130,411
Pickerel (Dore)	"	129,307	179,961	50,654	
Sturgeon	"	8,502	16,048	7,546	
Eels	"				
Perch	"	150	300	150	
Tullibee	"	7,453	8,914	1,461	
Catfish	"	3,460			3,460
Carp	"		1,400	1,400	
Mixed and Coarse fish	"	26,022	157,068	131,046	
Caviare	"		16	16	
Sturgeon Bladders	No.				
Lake Huron, North Channel:					
Herring	bbls.	145	138		7
Herring	lbs.	12,047	39,380	27,333	
Whitefish	bbls.	4	103	99	
Whitefish	lbs.	716,696	656,459		60,237
Trout	bbls.	68	179	111	
Trout	lbs.	1,503,678	1,725,232	221,554	
Pike	"	126,096	101,836		24,260
Pickerel (Dore)	"	408,464	332,602		75,862
Sturgeon	"	30,428	27,475		2,953
Eels	"				
Perch	"	14,909	16,183	1,274	
Tullibee	"	91,821	52,394		39,427
Catfish	"	2,055	1,396		659
Carp	"	1,416	5		1,411
Mixed and Coarse fish	"	491,697	425,518		66,179
Caviare	"	303	427	124	
turgeon Bladders	No.		248	248	
Georgian Bay:					
Herring	bbls.	239	461	222	
Herring	lbs.	35,254	99,069	63,815	
Whitefish	bbls.	391	1,330	939	
Whitefish	lbs.	415,803	392,425		23,378

Comparative Statement of yield for 1914-15, according to Districts—Continued.

——	1914.	1915.	Increase.	Decrease.
Georgian Bay—Continued:				
Trout ..... bbls....	558	3,662	3,104	.....
Trout ..... lbs....	835,776	1,388,289	552,513	.....
Pike ..... "	74,044	78,383	4,339	.....
Pickerel (Dore) ..... "	67,828	85,378	17,550	.....
Sturgeon ..... "	6,823	6,128	.....	695
Eels ..... "	.....	.....	.....	.....
Perch ..... "	6,806	11,017	4,211	.....
Tullibee ..... "	19,500	43,014	23,514	.....
Catfish ..... "	2,924	8,675	5,751	.....
Carp ..... "	2,500	15,550	13,050	.....
Mixed and Coarse Fish ..... "	51,560	45,504	.....	6,056
Caviare ..... "	1,026	905	.....	121
Sturgeon Bladders ..... No.....	300	.....	.....	300
Lake Huron (proper):				
Herring ..... bbls....	468	405	.....	63
Herring ..... lbs....	163,372	221,871	58,499	.....
Whitefish ..... bbls....	39	25	.....	14
Whitefish ..... lbs....	61,808	51,859	.....	9,949
Trout ..... bbls....	319	987	668	.....
Trout ..... lbs.....	669,604	787,617	118,013	.....
Pike ..... "	1,064	209	.....	855
Pickerel (Dore) ..... "	191,190	167,983	.....	23,207
Sturgeon ..... "	14,459	12,606	.....	1,853
Eels ..... "	50	.....	.....	50
Perch ..... "	115,223	161,658	46,435	.....
Tullibee ..... "	367,648	269,849	.....	97,799
Catfish ..... "	161	16	.....	145
Carp ..... "	10,006	11,014	1,008	.....
Mixed and coarse fish ..... "	103,840	80,817	.....	23,023
Caviare ..... "	1,435¾	982	.....	453¾
Sturgeon Bladders ..... No.....	25	13	.....	12
Lake St. Clair, etc.:				
Herring ..... bbls.....	.....	.....	.....	.....
Herring ..... lbs.....	.....	.....	.....	.....
Whitefish ..... bbls.....	.....	200	200	.....
Whitefish ..... lbs.....	46,600	43,700	.....	2,900
Trout ..... bbls.....	.....	.....	.....	.....
Trout ..... lbs.....	.....	.....	.....	.....
Pike ..... "	62,840	54,643	.....	8,197
Pickerel (Dore) ..... "	46,213	37,389	.....	8,824
Sturgeon ..... "	40,965	34,115	.....	6,850
Eels ..... "	8,450	.....	.....	8,450
Perch ..... "	283,640	112,616	.....	171,024
Tullibee ..... "	.....	.....	.....	.....
Catfish ..... "	78,370	66,268	.....	12,102
Carp ..... "	1,027,675	663,570	.....	364,105
Mixed and coarse fish ..... "	1,115,380	383,621	.....	731,759
Caviare ..... "	1,719	1,067	.....	652
Sturgeon Bladders ..... No.....	.....	.....	.....	.....
Lake Erie:				
Herring ..... bbls.....	.....	.....	.....	.....
Herring ..... lbs.....	5,981,542½	5,573,688	.....	407,854½
Whitefish ..... bbls.....	.....	.....	.....	.....
Whitefish ..... lbs.....	1,992,618	1,832,243	.....	160,375
Trout ..... bbls.....	18	.....	.....	18
Trout ..... lbs.....	2,494	2,383	.....	111
Pike ..... "	2,926,797	620,450	.....	2,296,347
Pickerel (Dore) ..... "	2,085,829	607,710	.....	1,478,119

Comparative Statement of yield for 1914-15, according to Districts—Continued.

	1914.	1915.	Increase.	Decrease.
Lake Erie.—Continued:				
Sturgeon ..... lbs....	56,266	56,315	49	.....
Eels ..... "	74	.....	.....	74
Perch ..... "	1,407,984	1,042,091	.....	365,893
Tullibee ..... "	254,297	21,100	.....	233,197
Catfish ..... "	49,092	38,436	.....	10,656
Carp ..... "	1,395,118	904,880	.....	490,238
Mixed and coarse fish ..... "	861,614	948,558	86,944	.....
Caviare ..... "	2,683½	2,861¾	178¼	.....
Sturgeon Bladders ..... No....	319	1,219	900	.....
Pickerel (Blue) ..... lbs....	.....	4,882,312	4,882,312	.....
Lake Ontario;				
Herring ..... bbls....	313½	95¾	.....	218¼
Herring ..... lbs....	991,406	1,706,391	714,985	.....
Whitefish ..... bbls....	1,413½	40	.....	1,373½
Whitefish ..... lbs....	515,537	809,618	294,081	.....
Trout ..... bbls....	163	23	.....	140
Trout ..... lbs....	600,364	550,769	.....	49,595
Pike ..... "	248,023	336,988	88,965	.....
Pickerel (Dore) ..... "	64,251	85,965	21,714	.....
Sturgeon ..... "	150	1,521	1,371	.....
Eels ..... "	299,913	219,703	.....	80,210
Perch ..... "	105,428	119,310	13,882	.....
Tullibee ..... "	1,980	.....	.....	1,980
Catfish ..... "	268,613	267,698	.....	915
Carp ..... "	81,478	112,518	31,040	.....
Mixed and Coarse fish ..... "	348,785	438,684	89,899	.....
Caviare ..... "	.....	.....	.....	.....
Sturgeon Bladders ..... No....	.....	.....	.....	.....
Herring, Smoked ..... lbs....	120,192	75,800	.....	44,392
Inland Waters:				
Herring ..... bbls....	9	.....	.....	9
Herring ..... lbs....	14,812	2,336	.....	12,476
Whitefish ..... bbls....	1½	.....	.....	1½
Whitefish ..... lbs....	21,057	15,711	.....	5,346
Trout ..... bbls....	.....	.....	.....	.....
Trout ..... lbs....	4,765	33,847	29,082	.....
Pike ..... "	25,126	59,085	33,959	.....
Pickerel (Dore) ..... "	1,215	11,045	9,830	.....
Sturgeon ..... "	765	11,615	10,850	.....
Eels ..... "	39,023	33,266	.....	5,757
Perch ..... "	18,987	19,170	183	.....
Tullibee ..... "	300	5,600	5,300	.....
Catfish ..... "	117,573	166,370	48,797	.....
Carp ..... "	146,752	118,840	.....	27,912
Mixed and Coarse fish ..... "	301,758	445,015	143,257	.....
Caviare ..... "	.....	22	22	.....
Sturgeon Bladders ..... No.	100	3	.....	97

Comparative Statement of the yield of the Province.

——	1914	1915	Increase.	Decrease.
Herring.....bbls.....	3,089½	3,334¼	245¼	.....
Herring.....lbs.....	7,980,368½	10,419,635	2,439,267	.....
Whitefish.....bbls.....	2,312	2,388	76	.....
Whitefish.....lbs.....	5,102,724	5,993,619	890,895	.....
Trout.....bbls.....	1,812	14,747½	12,935½	.....
Trout.....lbs.....	5,217,236	6,226,168	1,008,932	.....
Pike..... "	4,425,829	2,584,412	.....	1,841,417
Pickerel (Dore)..... "	3,917,265	2,671,768	.....	1,245,497
Sturgeon..... "	254,162	251,462	.....	2,700
Eels..... "	347,510	312,523	.....	34,987
Perch..... "	1,953,627	1,490,320	.....	463,307
Tullibee..... "	870,132	662,981	.....	207,151
Catfish..... "	588,668	667,489	78,821	.....
Carp..... "	2,789,675	2,018,097	.....	771,578
Mixed and Coarse fish..... "	3,464,516	3,006,265	.....	458,251
Caviare..... "	8,852¼	7,980¼	.....	872
Herring, smoked..... "	120,192	75,800	.....	44,392
Pickerel (Blue)..... "	.....	4,882,312	4,882,312	.....
Sturgeon Bladders.....No.....	837½	1,604	766½	.....
Total Barrels.....	7,213½	20,469¾	.....	.....
Total Pounds.....	37,040,756¾	41,270,831¼	.....	.....
Total Increase of Barrels.....1915	.....	.....	13,256¼	.....
Total Increase of Pounds.....1915	.....	.....	4,230,075¼	.....

Statement of the yield and value of the Fisheries of the Province for the year 1915.

Kinds of Fish.	Quantity.	Price.	Value.
		$ c.	$ c.
Herring.....bbls.....	3,334¼	10 00	33,342 50
Herring.....lbs.....	10,419,635	05	520,981 75
Whitefish.....bbls.....	2,388	10 00	23,880 00
Whitefish.....lbs.....	5,993,619	10	599,361 90
Trout.....bbls.....	14,747½	10 00	147,475 00
Trout.....lbs.....	6,226,168	10	622,616 80
Pike..... "	2,584,412	08	206,752 96
Pickerel (Dore)..... "	2,671,768	10	267,176 80
Sturgeon..... "	251,462	15	37,719 30
Eels..... "	312,523	06	18,751 38
Perch..... "	1,490,320	05	74,516 00
Tullibee..... "	662,981	06	39,778 86
Catfish..... "	667,489	08	53,399 12
Carp..... "	2,018,097	05	40,361 94
Mixed and Coarse Fish..... "	3,006,265	05	150,313 25
Caviare..... "	7,980¼	1 00	7,980 25
Sturgeon Bladders.....No.....	1,604	60	962 40
Pickerel (Blue).....lbs.....	4,882,312	10	488,231 20
Herring, smoked..... "	75,800	10	7,580 00
Total.....	.....	.....	3,341,181 41

Value of Ontario Fisheries from 1870 to 1915, inclusive.

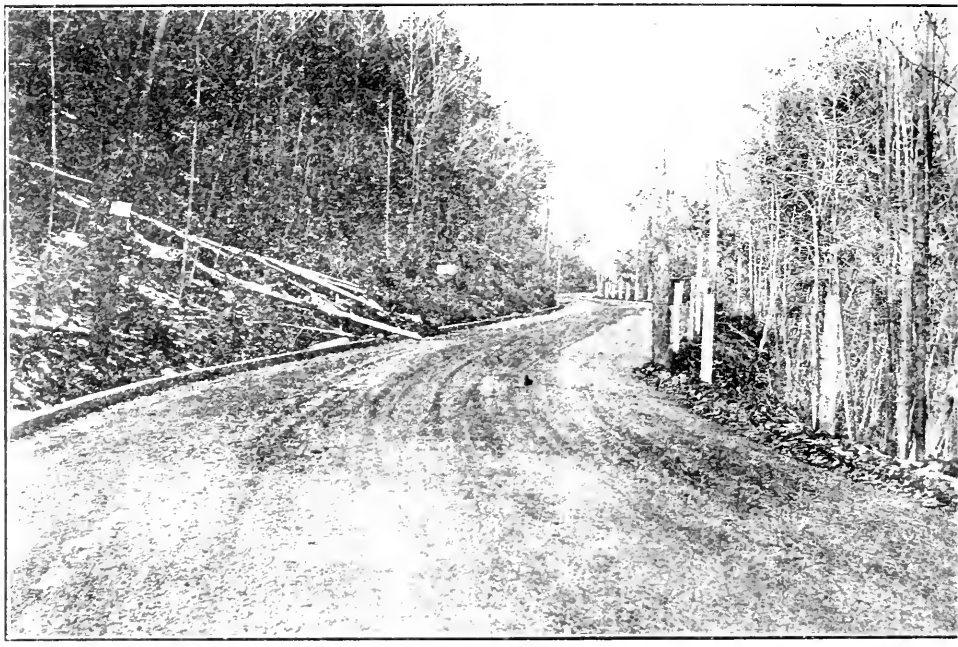
Year.	Value.	Year.	Value.
	$	Brought forward	$ c. 21,421,762 00
1870	264,982	1893	1,694,930 00
1871	193,524	1894	1,659,968 00
1872	267,633	1895	1,584,473 00
1873	293,091	1896	1,605,674 00
1874	446,267	1897	1,289,822 00
1875	453,194	1898	1,433,631 00
1876	437,229	1899	1,477,815 00
1877	438,223	1900	1,333,293 00
1878	348,122	1901	1,428,078 00
1879	367,133	1902	1,265,705 00
1880	444,491	1903	1,535,144 00
1881	509,903	1904	1,793,524 00
1882	825,457	1905	1,708,963 00
1883	1,027,033	1906	1,734,865 00
1884	1,133,724	1907	1,935,024 90
1885	1,342,692	1908	2,100,078 63
1886	1,435,998	1909	2,237,544 41
1887	1,531,850	1910	2,348,269 57
1888	1,839,869	1911	2,419,178 21
1889	1,963,123	1912	2,842,877 09
1890	2,009,637	1913	2,674,686 76
1891	1,806,389	1914	2,755,293 11
1892	2,042,198	1915	3,341,181 41
Carried forward	$21,421,762	Total	65,621,486 09

STATEMENT

of the number and value of the Tugs, Gasoline, Sail and Row Boats, Nets, Spears, &c., used in the Fishing Industry of the Province of Ontario, during the year 1915.

—	Number.	Value.
		$ c.
Tugs (2,718 tons)	118	522,650 00
Gasoline Launches	666	250,990 00
Boats (Sail or Row)	1,403	64,566 00
Gill-Nets	5,895,343 yards	412,756 60
Seines (35,494 yds)	175	14,116 00
Pound-Nets	925	362,800 00
Hoop-Nets	1,006	28,401 60
Dip or Roll Nets	34	247 00
Night Lines	98,870	4,965 15
Spears	419	1,087 25
Freezers and Ice-Houses	666	143,315 00
Piers and Wharves	195	54,838 00
Total		1,860,732 60

Number of men employed on Tugs	588
Gasoline Launches	1,399
Sail and Row Boats	2,127
	4,114



LINCOLN COUNTY.

A Lincoln County stone road in the Township of Louth, after improvement, with concrete curb at the foot of a side-slope, a bituminous road surface, and clear line of vision for drivers of approaching vehicles.

LINCOLN COUNTY.

Before improvement, with inferior drainage, rutted surface, and line of vision dangerously obstructed.

ANNUAL REPORT

ON

Highway Improvement

ONTARIO

1916

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
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1917

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To the Honourable F. G. Macdiarmid,

Minister of Public Works and Highways.

Sir,—I have the honour to transmit to you the Annual Report of the Department of Public Highways, having special reference to work carried on by the several counties of Ontario under the Act to Aid in the Improvement of Public Highways, and subsidized by the Province.

Accompanying this Report are a series of Appendices including a Report on Street Improvement in the Cities and Towns of Ontario; General Specifications for Steel and Concrete Highway Bridges; and a series of General Plans for Steel Bridges, prepared by the Department for the convenience and guidance of municipal authorities.

I have the honour to be,

Sir,

Your obedient servant,

W. A. McLean,

Deputy Minister of Highways.

Parliament Buildings, Toronto,
March 1st, 1917.

To His Honour Sir John Strathearn Hendrie, K.C.M.G., C.V.O., a Colonel in the Militia of Canada, etc., etc.,

Lieutenant-Governor of the Province of Ontario.

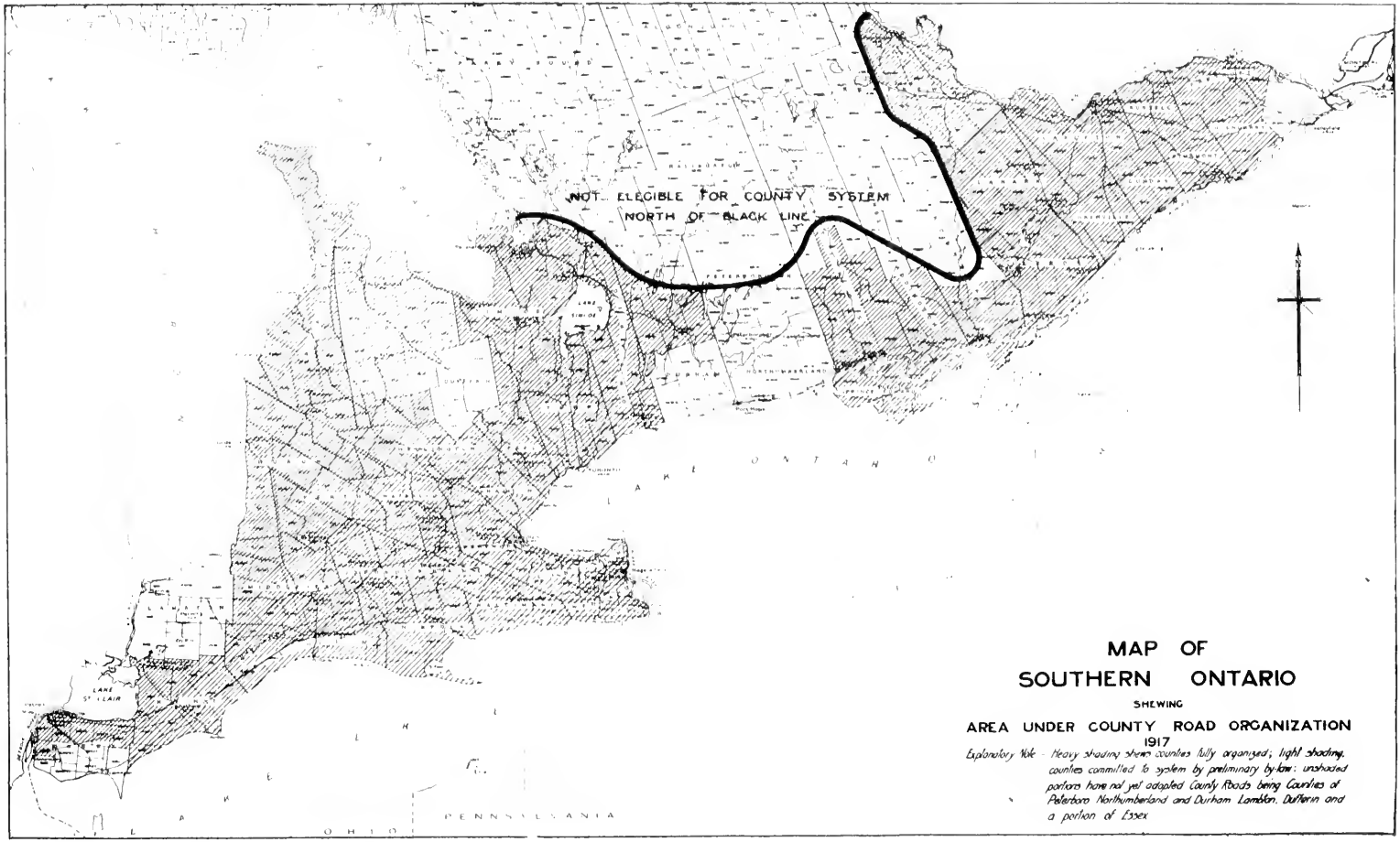
May it Please Your Honour:

I herewith beg to present for your consideration the Annual Report of the Department of Public Highways, relating to Highway Improvement in the Province of Ontario.

Respectfully submitted,

F. G. Macdiarmid,

Minister of Public Works and Highways.



MAP OF SOUTHERN ONTARIO

SHEWING

AREA UNDER COUNTY ROAD ORGANIZATION

1917

Explanatory Note - Heavy shading shews counties fully organized; light shading, counties committed to system by preliminary by-law: unshaded portions have not yet adopted County Roads being Counties of Peterboro Northumberland and Durham Lambton, Dufferin and a portion of Essex

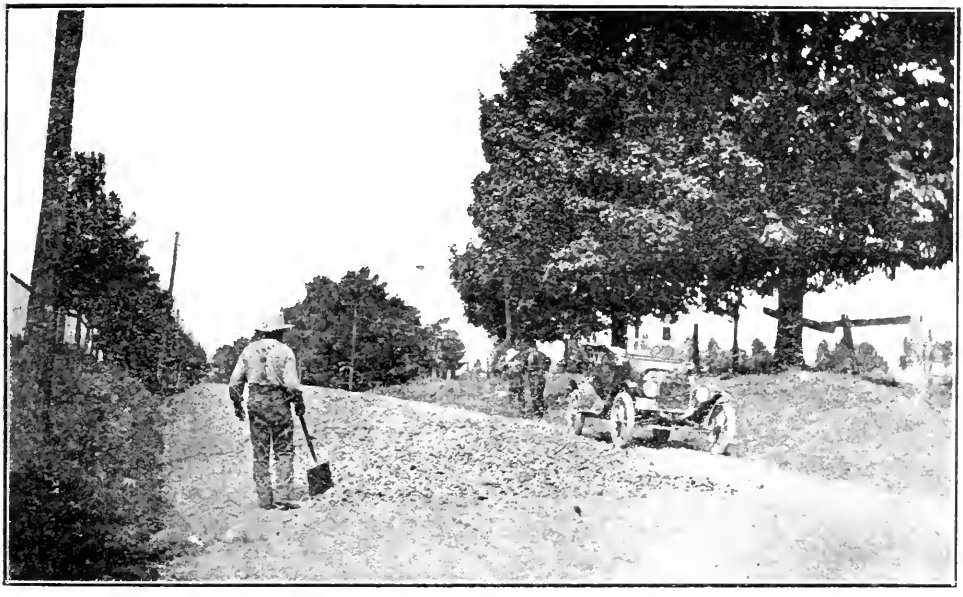
ANNUAL REPORT

OF THE

Department of Public Highways

W. A. McLEAN, Deputy Minister

Road construction, even under the most favourable conditions, is a slow process. The immense quantities of stone and other materials required, the heavy draft on men and teams for labour in rural districts, the restricted capacity of machinery to complete the work, the financial ability of municipal corporations, the availability of experienced supervision, all place limitations which can be transgressed only at a disproportionately increased cost.



WENTWORTH COUNTY.

Resurfacing a broken stone road. The loose stone, applied as shown in the illustration, is coated with fine material, watered, and thoroughly rolled.

Nevertheless, considerable progress has been made. Southern Ontario has 55,000 miles of road in the open country, of which 40 per cent. has been surfaced with gravel, broken stone or other more permanent material. It is a conservative estimate that, in the past ten years, $28,000,000 has been spent on rural roads, of which less than one-quarter remains as bonded debt. This is a record very creditable to municipal government of the Province; and the construction of leading highways to join up the systems of improved local and county roads, would place Ontario in a very enviable position with respect to good roads.

It will be a considerable period before all roads, or even all the leading roads, can be constructed in a thoroughly durable manner. Meantime the need for reasonably good roads is urgent. A solution will be found in a policy of general

maintenance, coupled with construction at such rate as financial and labour conditions will economically permit.

War conditions have naturally retarded road construction during the year 1916. Rates of interest have advanced, so that loans have not been favourable in cases where it has been necessary to finance construction by the sale of debentures. The scale of wages has been high, and labour scarce. Partially off-setting these disadvantages, prices for farm produce have been good, and farmers as a rule have been prosperous, with the result that municipal councils have been willing to undertake increased expenditures. But farm labour has been so scarce in many districts that councils, however willing, have not always been able to retain men even for urgent repair work, and durable construction has been delayed.

Climatic conditions during the winter, spring and summer of 1916 were unfavourable to roads. In January an exceptional thaw saturated the road surfaces and foundations, with the result that during the break-up of Spring, traffic was exceedingly destructive to road foundations. The continuation of wet weather did not permit normally dry conditions to return until the end of June. This was followed by a period of extreme drought and heat, very destructive to road surfaces under motor traffic. Thus the foundations were disrupted and the roads rutted by wet conditions early in the season, and the stone and gravel surfaces during the very dry weather loosened and "unravelled."

I.

CLASSIFICATION OF ROADS

Roads of the open country have until recently in Ontario been under the sole control of township councils. Experience in every country which has achieved a system of good roads has shown the necessity of classifying the roads according to traffic, placing each class under separate authority. By this means uniformity of construction is assured, opportunity for permanent maintenance is provided, and the cost can be more equitably distributed over the population and area benefited by the road.

The general trend of recent road legislation in Ontario has been toward a three-fold classification, so desirable for management and distribution of cost, and which is being evolved in the following manner:

1. Local or Township Roads, each carrying the traffic, or little more than the traffic, which is created by the farms adjoining the road; such roads to be controlled by and at the expense of township councils.

2. Leading Market or County Roads, the roads radiating from local market or shipping points, which carry a considerable accumulation of traffic; such roads to be controlled by and at the expense of county councils and cities, aided by a Provincial subsidy.

3. Main Roads between important cities and other terminal points, under the control of the Provincial Department of Public Highways.

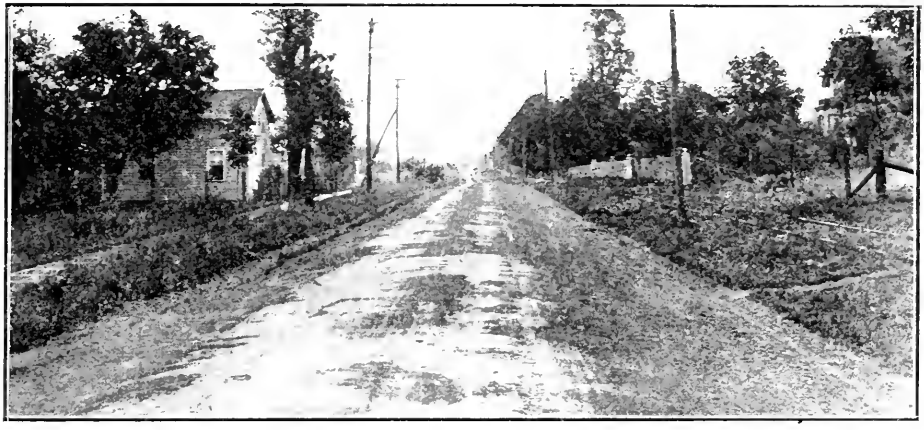
II.

COUNTY ROADS

The most systematic construction of roads in the Province has for some years been carried out by county councils, this work being subsidized by the Province. Between 250 and 300 miles of stone and gravel road are constructed annually under this organization.

These roads are essentially the market roads: the farmers' roads. They radi-

ate from market towns and shipping points, and meet the needs of accumulated farm traffic. The aiding of these market roads by the Province is an effective means of assisting townships in their road improvement, in that township councils are thereby relieved from the burden of their most expensive roads, and can devote their energies to the improvement of less travelled roads, comparatively inexpensive to maintain. Expenditure on roads is necessarily proportionate to the travel over them, and the roads radiating from market towns and shipping points carry the accumulated farm traffic of the district which they serve. It is estimated by the Department that 20 per cent. of the township roads, those usually included in a county system, carry 80 per cent. of the total farm traffic. The mileage of roads in a county system is usually from 12 to 18 per cent. of the total road mileage of the county, and is therefore somewhat in proportion to the number of townships and area of the county. The average county in Ontario has about 200 miles of county road.



OXFORD COUNTY.

This stone road in Oxford County, adjacent to Woodstock, is tarred for dust prevention, and as a protective coating under motor car traffic.

County roads are aided to the extent of 40 per cent. for construction and (under the legislation of 1915-16) 20 per cent. for maintenance. All county councils are authorized under the Highway Improvement Act to assume and control a system of leading roads within the County. Out of thirty-seven counties in the Province, twenty-five have adopted such systems; and twelve have not yet taken the step. A number of the latter have the matter under active consideration.*

County road systems have been established in the following counties: Wentworth, Lanark, Simcoe, Wellington, Lincoln, Oxford, Hastings, Peel, Middlesex, Lennox and Addington, Prince Edward, Halton, Perth, Frontenac, Waterloo, Carleton, Leeds and Grenville, York, Haldimand, Welland, Essex, Prescott and Russell, Dundas, Stormont and Glengarry, Brant, and Victoria.

Councils of counties not in this list should be encouraged by all interested ratepayers to carefully consider the merits of the system, which are exceedingly favourable to municipalities.

*While in press, the Counties of Elgin, Kent, Huron, Bruce, Norfolk and Ontario have adopted systems of county roads, and Grey and Renfrew have passed preliminary by-laws. Thus only six counties of the Province are still without county systems, and of these, two are committed to early adoption.

SCHEDULE A.

County Roads—Total Expenditures.

Since the passing of the Highway Improvement Act, and to the end of 1915, a total of $6,745,979.32 has been spent on county road construction, of which the Province has paid $2,248,659.65, in accordance with the following schedule. This includes the county expenditure of 1915, on which the Provincial grant was paid in 1916.

County.	Year of Commencement of work.	Mileage of County Road System.	Approximate Mileage completed to end of 1915	Total Expenditure on Roads and Culverts.	Average cost per mile completed, exclusive of bridges.	Total Expenditure on bridges.	Total approved Expenditure to end of 1915.	Total Government Grant to end of 1916.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
				$ c.	$ c.	$ c.	$ c.	$ c.
Wentworth	1902	140	140	324,163 16	2,315 45	19,917 09	470,968 87	156,989 62
Lanark	1903	110	92	122,305 95	1,329 41	33,120 32	214,327 63	71,442 52
Simcoe	1903	427	296	333,976 02	1,128 30	127,573 86	529,506 10	176,502 07
Wellington	1903	330	57	186,199 86	3,266 66	106,514 83	331,149 19	110,383 04
Lincoln	1904	29	29	101,124 13	3,487 04	12,027 52	127 626 60	42,542 20
Oxford	1904–7	220	145	371,222 87	2,560 15	78,668 84	561,233 47	187,077 81
Hastings	1904	478	243	194,077 74	798 67	232,201 78	454,011 14	151,337 03
Peel	1906	102	85	315,846 64	3,715 84	48,917 36	399,617 33	133,205 78
Middlesex	1906	390	110	204,184 23	1,856 22	175,986 54	406,017 72	135,339 22
Lennox & Addington	1906	171	87	95,046 01	1,092 48	22,806 91	162,695 73	54,231 90
Prince Edward	1907	122	91	237,863 04	2,613 88	10,780 04	292,879 85	97,626 61
Halton	1907	158	102	308,451 04	3,024 03	96,432 86	457,574 31	152,524 77
Perth	1907	187	78	175,292 60	2,247 34	57,132 97	255,267 57	85,089 17
Frontenac	1907	127	64	96,899 19	1,514 05	35,778 19	171,418 91	57,139 63
Waterloo	1908	175	52	81,421 38	1,565 79	52,419 94	186,777 57	62,259 18
Carleton	1909	220	68	163,471 43	2,403 99	28,306 60	213,925 02	71,308 33
Leeds & Grenville	1910	247	120	239,871 20	1,998 92	24,576 40	324,000 22	108,000 07
York	1911	210	73	528,912 89	7,245 38	20,520 26	585,530 57	195,176 86
Haldimand	1911	125	18	105,585 52	5,865 86	4,508 60	148,661 89	49,553 96
Welland	1912	157	82	401,047 46	4,890 82	7,597 43	452,789 63	150,929 88
Totals		4,125	2,032	4,586,962 36	2,257 36	1,195,788 34	6,745,979 32	2,248,659 65

SCHEDULE B.

County Roads in 1915-16.

Statement of Work and Expenditure on County Roads in 1915, with Provincial Grants paid in 1916.

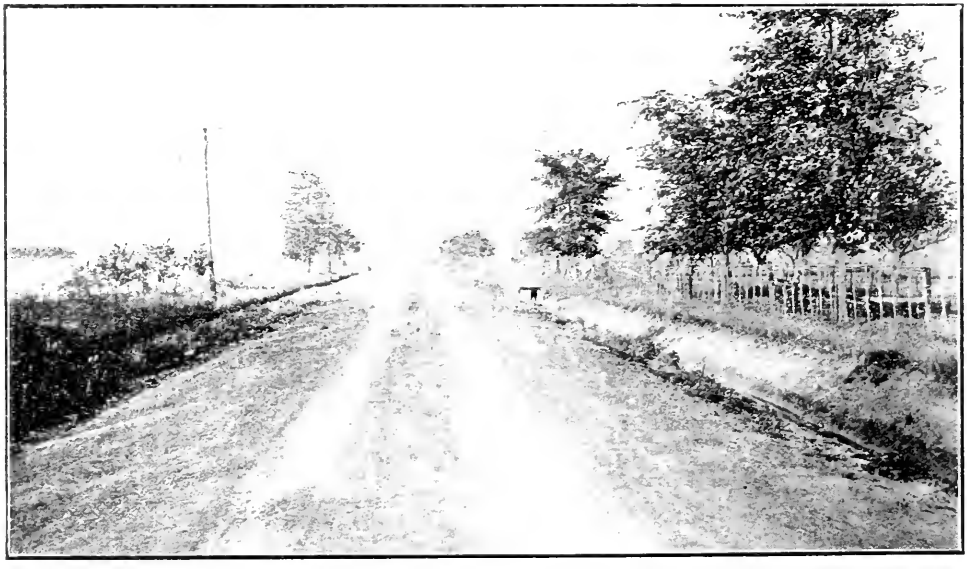
County.	Work Done during year 1915.							Approved Expenditure for year 1915.						
	Miles Graded.	Miles Stoned.	Miles Gravelled.	Tile Drain. Rods.	Bridges.	Pipe and Tile Culverts.	Other Culverts.	Roads and Culverts.	Bridges.	Machinery and Repairs.	County Grants to Towns and Villages.	Superintendence.	Total Approved Expenditure.	Government Grant, 1916.
								$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Wentworth	0.25	6.5	.....	150	2	11	4	35,305 20	1,979 69	3,020 91	.....	2,242 96	42,548 76	14,182 92
Lanark	1.5	0.5	.....	.....	1	.....	6	1,814 30	4,337 43	1,016 88	.....	1,023 00	8,191 61	2,730 53
Simcoe	2.07	0.6	2.1	.....	3	28	.....	4,140 02	6,569 04	188 39	1,392 45	1,800 00	14,089 90	4,696 63
Wellington	3.46	1.76	3.67	120	4	40	4	11,511 9[illegible]	6,330 43	887 67	1,879 16	2,134 28	22,743 47	7,581 16
Lincoln	.....	0.1	.....	.....	3	9	16	1,865 40	809 36	658 0[illegible]	.....	1,048 07	4,380 86	1,460 29
Oxford	.....	15.75	9.5	3,551	2	13	1	66,804 26	2,129 47	5,380 60	1,626 86	1,134 81	77,076 00	25,692 00
Hastings	2.3	3.8	11.9	.....	5	3	1	9,434 20	9,400 31	913 48	.....	1,600 00	21,347 99	7,116 00
Peel	.....	4.7	0.5	.....	1	2	14	18,462 58	1,740 13	201 76	.....	1,057 85	21,462 32	7,154 11
Middlesex	.....	1.9	15.2	1,859	3	7	.....	24,652 09	7,865 07	151 83	1,187 80	1,651 95	35,508 74	11,836 24
Lennox and Addington	.....	3.1	1.0	.....	2	22	1	8,796 54	2,325 49	1,242 70	2,203 01	1,057 29	15,625 03	5,208 34
Prince Edward	.....	6.4	.....	.....	.....	18	1	17,237 20	.....	2,439 30	545 83	1,274 13	21,496 46	7,165 49
Halton	1.0	18.5	2.1	8	4	36	7	53,070 16	2,840 28	1,511 95	.....	1,000 00	58,422 39	19,474 13
Perth	2.75	0.4	10.0	1,848	3	.....	5	19,941 17	2,028 00	.....	.....	674 00	22,643 17	7,547 72
Frontenac	0.6	10.6	0.75	62	1	36	1	15,270 24	2,061 10	1,457 20	.....	857 50	19,646 14	6,548 71
Waterloo	1.40	3.5	11.47	55	1	15	4	13,244 09	754 87	494 37	.....	1,694 50	16,187 83	5,395 94
Carleton	8.75	11.22	5.44	.....	2	23	2	24,508 98	3,291 89	465 00	.....	930 50	29,196 37	9,732 12
Leeds and Grenville	2.25	12.15	1.25	6	1	34	.....	20,629 86	68 22	772 09	6,907 49	1,907 46	30,285 12	10,095 04
York	1.0	12.0	.....	3	2	14	12	99,284 78	2,966 64	701 27	.....	3,506 81	106,459 50	35,486 50
Haldimand	5.67	2.76	.....	.....	4	84	5	6,675 95	2,576 38	1,284 67	1,500 00	824 35	12,861 35	4,287 12
Welland	2.25	38.76	.....	74	4	38	22	213,491 02	2,139 78	3,203 35	10,500 00	2,032 89	231,367 04	77,122 35
Totals	35.25	155.00	74.88	7,736	48	433	106	666,139 97	62,213 58	25,991 55	27,742 60	29,452 35	811,540 05	270,513 34

III.

COST PER MILE

Average costs per mile of county roads being constructed in the Province under the Highway Improvement Act are shown in column 6 of schedule "A," (page 12).

This cost varies with local conditions, and the cost of each mile of road should be estimated on its own merits. Some counties have an abundance of local stone; in other counties, stone must be imported by rail, with attendant freight charges, and additional cost of handling from the cars. Some counties have large deposits of gravel, and build gravel roads. Some roads may already have had a coating of stone or gravel, which serves as a foundation and requiring only resurfacing; other roads have had little or no previous attention.



EARTH ROAD MAINTENANCE IN ESSEX COUNTY.

The clay roads of Essex County are systematically dragged and are kept in excellent condition for dry-weather traffic, pending the time when a more durable gravel or stone surface can be applied.

A number of districts in Ontario, such as portions of York, Peel, Halton, and Welland, have no local material for road-making. In these cases an entirely new road must be built, often on a clay subsoil, and freight rates on stone must be added—all tending to higher cost, and amounting to from $4,000 to $8,000 per mile.

In other districts, such as Frontenac, Lanark, or Leeds and Grenville, there is an abundant supply of stone on or close to the road, and frequently the task is one of regrading and putting a surface over an old stone or macadam road. In such cases, a cost of $2,500 or $3,500 per mile is an ordinary expenditure.

Certain districts, on the other hand, have an abundant supply of gravel. Many of the roads have been gravelled from time to time and a good foundation has been made. In such cases, the work usually consists of removing sod shoulders, improving the drainage, and adding a new surface of gravel—costing from $1,000 to $2,000 per mile for substantial work suited to local traffic.

The following instances have been selected from a number of counties to indicate the various conditions under which work has been carried on:

Lanark.

(a) County Roads Nos. 7 and 19, Pakenham Township.

An old stone road originally surfaced in 1905, resurfaced in 1916 with crushed limestone and granite. Length of road resurfaced, 3½ miles; width of stone applied, 7 feet, depth of stone, 3 to 8 inches, depending on condition of road. The stone was not rolled, but ruts were carefully filled as they formed, leaving a good crown on consolidation. Stone was purchased at a cost of $3 per cord delivered and piled near the road, ready for crushing. Crushing, hauling and spreading were done by day labour for $3.50 per cord. The average haul from crusher to road was ¾ mile. In all, 415 cords of stone was used, the itemized cost of the work being as follows:

415 cords of stone purchased at $3 per cord	$1,245.00
Crushing, hauling and spreading 415 cords at $3.50	1,452.50
Trimming subgrade with grader	25.00
Filling ruts during consolidation	13.27
Total cost	$2,735.77
Average cost per mile	$781.65

(b) County Road No. 8, Beckwith Township.

Resurfacing 3 miles of old stone road with crushed limestone. Stone used, 300 cords, spread 7 feet wide, and 3 to 6 inches deep, depending on the condition of the old road. The average haul for the crushed stone was one mile.

Detailed cost of work:

300 cords of stone purchased at $3	$ 900.00
Crushing, hauling and spreading 300 cords at $3.75	1,125.00
Trimming with grader	50.00
Filling ruts during consolidation	28.61
Total cost	$2,103.61
Average cost per mile	$701.20

Wages—Men, $1.75 per day and board; teams, $2.75 per day with board for teamsters and hay for horses.

Frontenac.

Road No. 12, Pittsburgh Township, constructed in 1914. Length 2 miles.

The road was originally flat and crooked with poor surface drainage. It was carefully straightened before being surfaced. All work was done by day labour. Approximately 375 toise (3,000 cubic yards) were used, the total cost being $7.58 per toise, or 95 cents per cubic yard.

The cost in detail:

Stone purchased in quarry, 375½ toise at 25 cents.	$ 93.88
Quarrying, crushing, hauling, and spreading	2,060.41
Rolling, sprinkling and finishing	460.00
Grading	166.72
Guard rail	59.99
Total cost	$2,841.00
Cost per mile	$1,420.50

Prevailing wages in Frontenac County were: Foremen, $3.50 per day; men, $2.00 per day; teams, $4.00 per day; engineers, $3.00 per day.

Leeds and Grenville.

Road from Smith's Falls to Jasper, built in 1914 and 1915. Length, 6 miles.

This road traverses rolling country with fair drainage facilities, being principally sandy loam. Prior to construction, very little grading had been done and the road was generally flat and poorly drained. Grading included cutting a number of hills and filling hollows. Weak foundations were strengthened where necessary with fieldstone base. Stone was quarried limestone of good quality. Quarrying and crushing were done by contract, the price for crushing including delivery on the road. The metalled surface is 9 feet wide with an average depth, consolidated, of 8 inches.

Details of cost are as follows:

Grading, including cutting and filling and laying fieldstone base where necessary		$2,175.71
Culverts—		
2—30-in. x 24-ft., corrugated iron		
1—24-in. x 22½-ft., concrete tile		
2—18-in. x 22½-ft., concrete tile		
3—15-in. x. 22½-ft., concrete tile		467.92
Stone—		
Purchased in quarry	$ 75.00	
Quarrying 1,567 cords at $2.15.....	3,369.02	
Crushing 1,506.35 cords at $3.75.....	5,648.80	
(including delivery on road)		9,092.82
Rolling, watering, and finishing		1,138.84
Total cost		$12,875.29
Average cost per mile		$2,146.00

Wages: Men, $1.75 to $2.00 per day; teams, $4.00 per day.

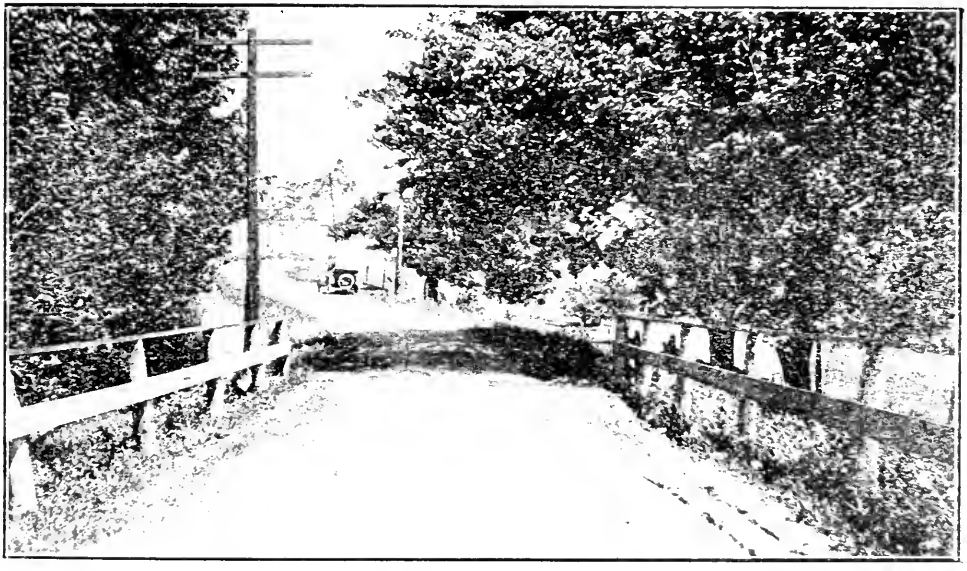
Halton.

Road No. 2a, Lots 1-5, Trafalgar Township.

This section of road is over a level country, the subsoil being heavy clay and the drainage somewhat difficult. Two miles of road were constructed of crushed limestone. The stone was quarried, crushed and hauled an average distance of

WELLAND COUNTY.

A dangerous turn before improvement.



WELLAND COUNTY.

After improvement, showing the newly constructed broken stone road, and the better alignment giving an unobstructed view for approaching vehicles.

seven miles, by contract, for $1.87 per cubic yard: the County furnishing the crushing outfit. Spreading, rolling and finishing was done by the County.

The stone was laid 9 feet wide and 8 inches deep.

The details are as follows:

3,080 yards of stone at $1.87	$5,759.60
Grading	490.69
Spreading, rolling and finishing	972.95
Fuel for roller	145.89
Supplies	140.83
Lumber for stone bin	33.52
Culvert	158.90
Total cost	$7,702.38
Average cost per mile	$3,851.19

Road No. 4. Nassagaweya Township. Four miles built in 1915.

The road traverses slightly rolling country with a gravelly soil and good drainage facilities. The metalled portion is 9 feet wide and 8 inches deep. A number of hills were cut, hollows filled, the grade widened and 8 concrete tile culverts were placed. Machinery was furnished by the County, and crushing and hauling was done by contract. Crushed fieldstone was used, being hauled from piles in the fields and crushed at the roadside. The average haul was approximately ½ mile.

Details of the cost are as follows:

Grading	$1,351.67
Hauling, crushing and delivering stone	2,946.63
Spreading, rolling, and finishing	1,279.97
Fuel and supplies	213.55
Culverts	154.50
Total cost	$5,946.32
Average cost per mile	$1,486.58

Wages: Men, $2.00 per day; teams, $4.00 per day.

Welland.

Road No. 23, Townline between Thorold and Pelham Townships, 2.88 miles.

This road carries concentrated market traffic into the town of Welland from the principal intensive farming section of Welland County. It passes over a level clay subgrade where drainage facilities are poor. The road has not been previously metalled. The length completed was 2.88 miles. Average haul for material was 1¼ miles, over heavy clay roads. The road had been previously graded, requiring only light finishing work at the time of construction. The metalled portion consists of crushed limestone laid 9 feet wide, and to give a consolidated depth of 9 inches.

Wages paid on this work were $2.00 and $5.00 per day for men and teams respectively.

Following are details of the cost, which is representative of much of the work done in this County:

Grading	$ 196 20
Tile draining	35.25
7,393.75 tons stone at $1.10 per ton (f.o.b. railway siding)	8,133.12
Hauling stone, spreading, rolling and finishing	4,819.32
Seven tile and other culverts	494.61
Total cost	$13,678.50
Average cost per mile	$4,750.00

WENTWORTH.

Caledonia Road, south of Hamilton.

This is a heavily travelled road, carrying market traffic from a large territory into the City of Hamilton. It was an old stone road, previously graded but in badly worn condition. A number of grades were reduced and the road was widened in places. The metal used consisted of limestone from a commercial quarry at Hagersville, carried to the vicinity of the work by rail; the cost of the stone being $5.25 per cord (equivalent to about $1.10 per cubic yard) f.o.b. the railway siding. The average haul for stone was 4 miles over rough roads. The length of the work was 1¾ miles; stone was laid 9 feet wide, and to a consolidated depth of from 6 to 10 inches, depending on the original condition of the road.

Wages paid on this work were $2.00 per day for men, and $5.00 per day for teams.

Details of the cost are:

523.09 cords crushed limestone at $5.25, f.o.b. railway siding, Glanford	$2,746.22
Fuel, oil, supplies, etc.	206.99
2 corrugated metal culverts	69 00
Labour—hauling, spreading, rolling and finishing	6,707 31
Total cost	$9,729.31
Average cost per mile	$5,560.00

MIDDLESEX.

Road No. 9, London to Lambeth. 6 miles.

An old gravel toll road in fair condition. The road had been previously graded, requiring only light trimming to restore the old cross-section. Pit gravel of good quality ranging from sand to 2 inches was used, being spread 9 feet wide, with an average depth of 7 inches and consolidated with a steam roller. The average length of haul was 2½ miles. Approximately 215 cords (1,020 cubic yards) per mile was used; the average cost per mile, which is representative of the greater part of Middlesex County work, being as follows:

Gravel in pit, 215 cords, at 55 cents	$118.25
Hauling gravel, 215 cords at $4.00	860.00
Spreading	53.75
Rolling	53.75
	$1,085.75

Wages on this work were $2.00, and $4.50 per day for men and teams respectively.

York.

Road No. 3, Markham Township, 4¼ miles.

Constructed by day labour, all stone was imported at a cost of $1.30 per ton, f.o.b. railway siding, which price is equivalent to $1.70 per cubic yard. A total of 5,320 cubic yards of stone was used, the metal being 10 feet wide. The work included 5,600 feet of tile drain. The country traversed is rolling, giving good drainage, and heavy grading had previously been done.

The cost in detail:

7,016 tons (5,320 cu. yds.) stone at $1.30 per ton	$9,120.80
Unloading cars	833.24
Hauling stone (average 1¼ miles)	2,069.93
Labour, levelling and finishing	1,257.78
Rolling and watering	524.30
Tools	130.00
Fuel, oil and supplies	230.00
Grading	424.39
Tile draining, 5,600 feet, 4-in. tile	412.51
Total cost of work	$15,002.95
Average cost per mile	$3,530.00

Length of work 4¼ miles.

Wages paid: Men $2.00 and $2.25; teams, $5.00 per day.

Lennox and Addington.

County Road No. 9, York Road east of Odessa.

This is a section of the heavily travelled York Road, carrying the through traffic between Kingston and Belleville, in addition to heavy local market traffic. The road, originally an important stone military road, had received little repair, the surface being rough and worn out. A deep course of crushed limestone 12 feet wide was applied and finished with a roller. Material was obtained from a quarry in the immediate vicinity, resulting in very low haulage costs. Approximately 3,760 cubic yards of stone was placed on this section of 1¼ miles.

The following is the cost in detail:

Quarrying and crushing	$2,022.92
Hauling stone	623.25
Spreading, rolling and sprinkling	659.70
Tile for culverts	34.75
Total cost of work	$3,340.62
Cost per mile	$2,672.50

Wages: $1.75 to $2.00 per day for men and $3.50 per day for teams.

Prince Edward.

Road No. 17B, Point Traverse Road, South Marysburg Township.

This is a moderately travelled road carrying market traffic en route to Picton. A section 2.16 miles in length was constructed in 1915. The road was an old earth

road in fair condition. The subgrade was straightened and crowned prior to metalling. Crushed stone from a county quarry was applied 9 feet wide and 10 inches deep, and thoroughly rolled. A total of 4,192 cubic yards was used. The length of haul averaged 1⅛ miles. Wages on this work were $1.75 to $2.25 per day for men and $3.75 per day for teams.

The cost in detail was:

Grading	$ 804.47
Quarrying and crushing	2,180.90
Hauling stone	1,341.29
Spreading, rolling and finishing	817.86
Culverts	92.60
Total cost	$5,237.12
Average cost per mile	$2,425.00

Road No. 1 B, Consecon Road, Hillier Township.

A section of the main travelled road between Trenton and Picton 1.6 miles in length was constructed in 1915. The road before improvement was narrow, low and flat. Before metalling the grade was raised, widened and straightened, two hills were cut and hollows filled. Crushed limestone was obtained from a quarry owned by the County, the average haul being approximately one mile. A total of 2,904 cubic yards was used on the work, the stone laid 9 feet wide and 10 inches deep. Wages paid were $2.00 to $2.50 per day for men and $4.00 per day for teams.

The itemized cost is as follows:

Grading	$1,110.86
Quarrying and crushing	2,261.86
Spreading, rolling and finishing	676.51
Hauling stone	1,027.22
200 feet 12-inch tile drain	126.43
Total cost	$5,202.88
Cost per mile	$3,251.80

IV.

CREATED BY COUNTY BY-LAW

A county council is authorized under section 4 of the Highway Improvement Act to assume a system of roads for construction and maintenance. These roads become county roads, under the jurisdiction and control of the county corporation. The by-law usually contains general provision for raising money either by annual rate or the issue of debentures, and includes a schedule of roads taken over by the county; care being taken to properly describe the location of each road, and to fix the terminal points, so that no legal uncertainty as to responsibility for any section of road may afterwards arise between the county and minor municipality.

V.

A SUBSTANTIAL PROVINCIAL SUBSIDY

The Provincial Government contributes 40 per cent. of the total expenditure on construction of county roads which is paid to the county annually, after the close of each year's work. It should be made clear that the Provincial subsidy is 40 per cent. of the total expenditure; not a percentage of the county contribution. Thus,—

The County raises	60 cents.
The Province contributes	40 cents.
The County spends	One dollar.

The Province also contributes 20 per cent. of the total cost of maintenance, estimated on a similar basis.

VI.

PROVINCIAL COUNTY ROADS

Co-operative with Provincial roads, but under county control, certain roads may be designated by the Highways Department as "Provincial County Roads." To such roads the Province will contribute 60 per cent. of the cost of construction, and maintenance. These roads are intended to enable the more equitable maintenance of certain county roads, carrying a considerable proportion of through traffic, but which the county may efficiently maintain, and which are not of sufficient importance to be classed as Provincial, or which it is not desirable, or expedient, for the Province to assume as Provincial Highways. They continue to be county roads, but because of heavy through traffic, will receive an increased subsidy. In general, they will form branches of the Provincial Highway System, joining up cities and other important terminal points of traffic. They constitute an intermediate link between the Provincial and county road systems, and may be subject to special regulation.

VII.

A NEW BURDEN IS NOT CREATED

County road expenditure is by no means an added burden. No new roads are created. The roads already exist, are now being maintained, bridges and culverts are being built on them; and they are essentially those which are now most heavily travelled, and therefore require a considerable township expenditure for maintenance in their present state. Bridges and culverts on them must be built in any event; the statute labour is a considerable off-set to a county appropriation.

If from a reasonable annual expenditure on a county road system, there is deducted the expenditure on bridges and culverts necessary in any event, plus the cash expenditure and statute labour now being applied to these roads by township councils, it will be seen that a substantial government grant is earned in a manner exceedingly favourable to the municipalities.

VIII.

THE ANNUAL COST IS NOT BURDENSOME

The annual cost, rather than the total cost in a term of years, is the view-point from which a county road system should be considered.

Road-building is necessarily a slow process. Ten or fifteen years is commonly required to complete a county road system. The work should, therefore, be considered and financed on an annual basis, and may be carried on, if desired, without debenture issues. The total cost in a term of years should not deter counties from undertaking construction if the annual cost is not burdensome. The annual cost must be off-set in any event by the expenditure now being made on proposed county roads, including money and statute labour. As these roads are the most heavily travelled they are now absorbing a large part of present township outlay for roads.

An annual rate of one mill, or one and one-half mills on the county assessment would, with good management, enable most counties in the Province to finance construction. This may be supplemented by a small debenture issue to meet the cost of bridges, special grading or other permanent work.

IX.

EQUALIZING EXPENDITURE AMONG MUNICIPALITIES

County councils frequently desire to make their expenditure in each township proportionate to equalized assessment. In this way, there is spent in each township an amount equal to what the township has contributed, plus the Provincial grant. The Act will permit a county to adopt this adjustment of expenditure if so desired.

The same result may be approximately reached by assuming a system of roads so proportioned in mileage and estimated cost per mile, that the aggregate expenditure, when the system is completed, will be proportionate in each municipality to the equalized assessment.

Some counties endeavour to make an expenditure annually in each township. It is generally preferable, however, to equalize the expenditure in a term of three or more years, as the construction of short sections annually is not economical, and is antagonistic to good organization.

X.

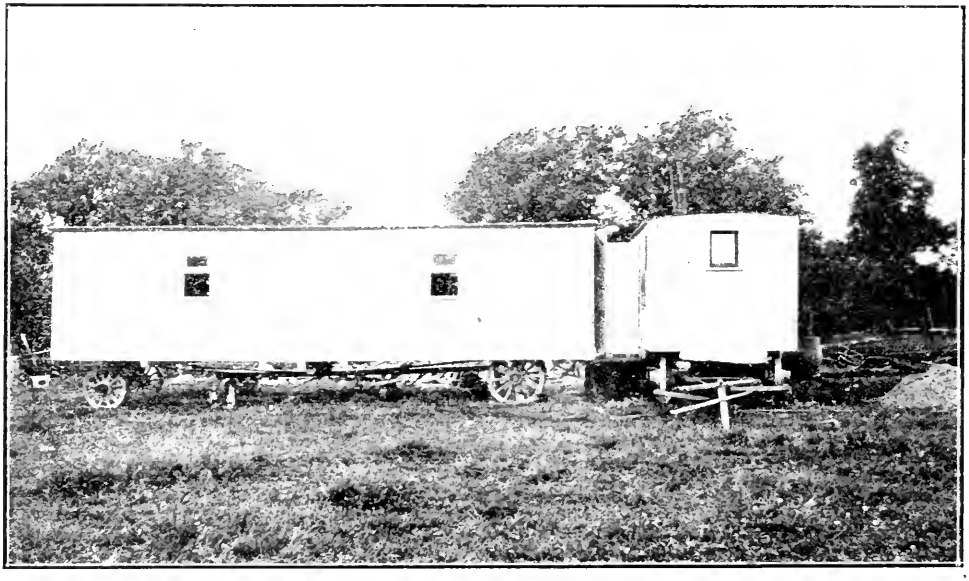
TOWNS AND VILLAGES ARE AIDED

The county council may by by-law make grants to towns and villages not separated from the county, for the improvement of extensions or connecting links of county roads in such towns and villages, and these grants may be included in the statement of annual expenditure upon which the Provincial subsidy of 40 per cent. is computed. Grants are in some counties proportionate to what the town or village has paid in the county rate, plus the Provincial subsidy. In the case of grants to municipalities with a population of over 1,500, the improvement must be carried out on streets passing farm or sparsely occupied property, in order to earn the Provincial subsidy. Streets may in cases be assumed as county roads if so desired.

XI.

STATUTE LABOUR ALONG COUNTY ROADS

Statute labour along the county roads belongs to the township councils, and its value is therefore to be credited to the expenditure which the county may make on county roads. This labour may be worked out on the side roads, or may be wholly commuted. On a county system of 200 miles, this would commonly amount to 10,000 days, having a commutable value of not less than $10,000. Devoted to township roads, it materially aids in raising the general standard of roads in the county. By applying it to local roads feeding the county roads, the advantages of the county roads are more rapidly extended to all parts of the township. The comparatively light travel on the local feeders is such that these local roads can, under favourable circumstances, be kept in reasonable condition by statute labour or its value expended on them.



LANARK COUNTY.

A Road Camp in Lanark County, by means of which the men are always close to their work.

XII.

BRIDGES AND CULVERTS

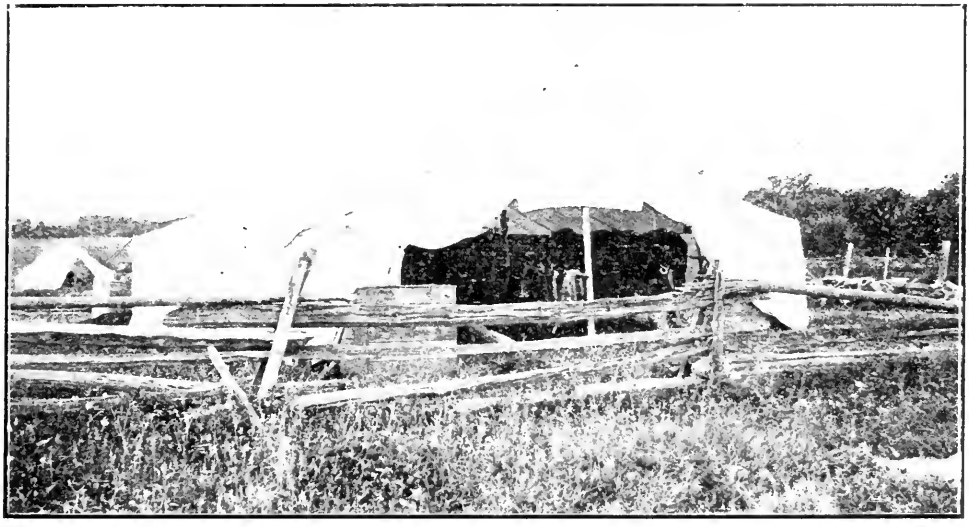
The Provincial subsidy for construction and maintenance applies to all bridges and culverts on the approved system of county roads. The construction of bridges and culverts is carried out as conditions require—either before or after the improvement of the county road of which they are a part. It is customary for county councils to construct culverts and bridges in advance of the road improvement. Many old bridges and culverts are badly located—are off the line of the road, or at an angle with it—and it is frequently desirable to renew such structures in advance, so as to facilitate the grading and straightening of the road.

XIII.

COMMENCING CONSTRUCTION

As county roads are essentially the market roads radiating from towns, villages and shipping points of each locality, the "greatest good to the greatest number" will generally be obtained by commencing construction at the towns, villages and shipping points, and working out from them.

In some cases, the best service will be obtained by first constructing a particularly bad section of road, each end of which is reasonably passable. In other cases, there may be urgent need to join two local objective points. In general, however, the rule holds that most benefit will result by commencing construction where there is the greatest accumulation of traffic: that is, adjacent to the towns, villages and shipping points of each township.



LANARK COUNTY.
The "Stable-tent," an important part of the Road Camp.

XIV.

TYPE OF ROAD

The type of road built by county councils is adapted to local traffic requirements. In general, the roads are given an earth grade 24 feet in width, with open drains at each side. Gravel or broken stone is commonly placed in the centre of the grade to a width of 9 feet for single-track traffic; and up to 18 feet in width close to cities where double-track traffic is provided for, with an earth grade 26 to 28 feet wide in the latter case.

For single-track traffic, from 1,500 to 2,500 cubic yards of crushed stone are used, according to the earth foundation and condition of the road to begin with; while for double-track construction, twice these quantities may be used.

The process is to first prepare the earth sub-grade and open the ditches, using a grading machine as far as possible for this work. This subgrade is then rolled, and places of settlement under the roller are filled until a level grade is produced.

A layer of broken stone is spread to the required width and depth. With the grading machine, earth is drawn in from the edges of the road to form a shoulder for the stone. A steam roller is then passed over the stone, weak spots which develop are filled with more stone, and a level surface is produced. Stone screenings are then spread over the stone; these are well wetted from a suitable sprinkling wagon, and consolidation is completed with the steam roller.

This process is subject to variation as the type of road changes. Thus, a heavy foundation of large stone may first be laid; or in place of stone screenings, an asphalt or tar binder may be used; or a concrete pavement may be laid if traffic is heavy.

XV.

SUPERINTENDENCE

The work is placed in charge of a superintendent appointed by the county council. The superintendent is, therefore, an officer of the county council, acting in co-operation with the council. He should be an experienced construction man, well qualified to organize and direct labour. The average salary is $1,500 yearly, of which the Province contributes 40 per cent., or $600, leaving only $900 as the cost to the county.

The relation of the engineers of the Department of Public Highways to the work resolves itself largely into one of an advisory nature, rather than one of inspection. The expert assistance and co-operation of the Department is desired and sought by county authorities, when they have become acquainted with the objects of the Act. There is no charge for services of engineers of the Department, and they are available at all times for consultation and advice.

XVI.

REPAIR AND MAINTENANCE

The Provincial subsidy of 20 per cent. for repair and maintenance is payable as soon as the roads are definitely assumed by the county; and is not delayed until after the roads have been constructed.

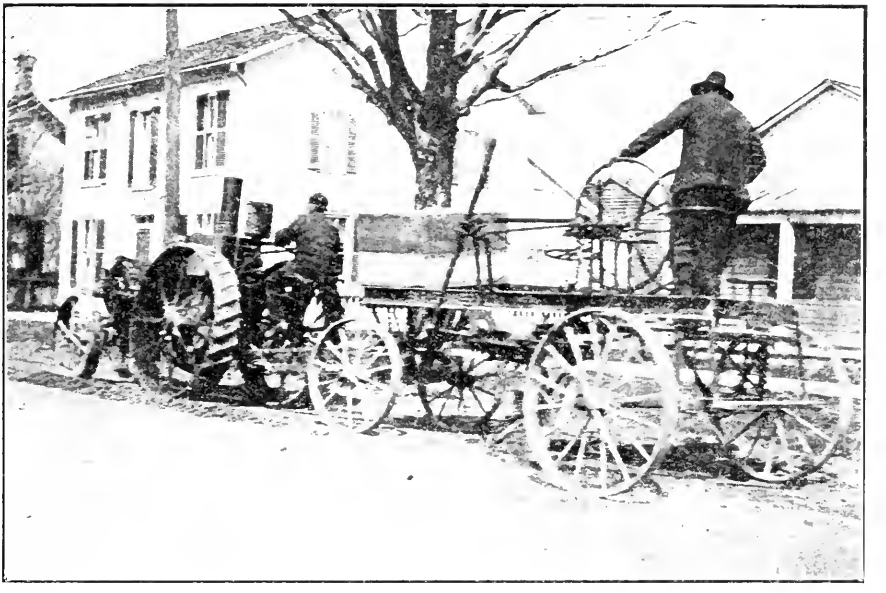
A considerable period is necessary to complete all parts of a county system, many roads must be used before their substantial improvement can be carried out, and during this period it is the duty of the county council to keep the roads in reasonable condition for traffic. Loam, clay, sand and inferior gravel roads can be graded without delay, and thereafter kept systematically dragged and shaped until a substantial surface crust can be put on. In this way excellent service can be done by a county council, and the Provincial subsidy is intended to encourage such methods.

After construction, a careful and constant system of repair and maintenance should be applied. Repairs should not be delayed until after the road is rutted, impassable, and the surface destroyed; but they should be made continuously, as soon as signs of wear appear, in order that good service will be rendered at all times, and so that the original capital investment will not be lost by neglect. A continuous and thorough system of repair and maintenance is the only means whereby good roads can be retained with efficiency and economy.

XVII.

MACHINERY

The machinery required varies with the type of road built and material used. If no local stone is available, stone crushing plants will not be necessary. At times it is profitable to put pit gravel through a crusher and screen. A county is required to have at least one steam roller (costing about $2,800) The average county has gradually invested about $20,000 in machinery and plant. Of this the Province pays 40 per cent., so that an expenditure of $20,000 on machinery costs the county only $12,000. A judicious expenditure on machinery is one of the most profitable that can be made, as proper equipment will reduce the total cost of the work, and will produce better and more durable results. When not in use on county roads the machinery may be loaned to towns, villages and townships wishing to carry on special construction.



GRADING IN BRANT COUNTY.

When a county assumes a system of County Roads, a first step should be to put the entire system in repair by opening drains, cutting off high shoulders, and doing such other earth-work as occasion may require. The illustration shows a grader at work on this class of improvement, drawn by a gasoline tractor.

The various units commonly used in road construction have under normal conditions cost approximately as follows:

Ten-ton steam roller	$2,800.00
Stone crusher, jaw capacity 9-in. x 16-in.	900.00
Mounted stone bin, 16 cu. yds. capacity	400.00
Elevator and revolving screen for use with stone crusher	300.00
Traction engine for operating crusher	1,500.00

Steam tractor for hauling material, 25 h.p.	$2,400.00
Scarifier	600.00
Heavy grader	240.00
Light grader	70.00
Stone wagon	125.00
Water tank and sprinkler	150.00
Steel road drag	15.00

XVIII.

SUBURBAN ROADS

Provision is made under the Ontario Highways Act, that a city may co-operate with the county council in improving the leading county roads adjacent to the city, and thereby obtain a more substantial type of construction for such suburban roads. The procedure is as follows:—

A county council by resolution makes application to the Lieutenant-Governor in Council asking that a commission be selected to deal with the suburban roads or portions thereof in the county system adjacent to the city, and towards the construction and maintenance of which the city in question should contribute.

The Department of Public Highways submits the application to the city in question and considers their views in the matter.

Should the commission be recommended by the Department and authorized by Order-in-Council, it is made up of representatives chosen by the city and county council. In the case of a city having a population of less than 50,000, it would be composed of three persons, the county council selecting one member, the city selecting one, and the two agreeing upon a third. In the case of cities of over 50,000 population, the commission would be composed of five persons selected in a similar manner.

The first duty of the commission would be to determine the roads, and the length of each adjacent to the city, to which the city would contribute; the commission forming a board of arbitration for that purpose.

It is then the duty of the commission to determine the work to be undertaken each year, and to estimate the amounts required for construction and maintenance.

The county council would first approve or amend this estimate and authorize expenditure. It is then the duty of the county council, not later than the first day of March in each year, to notify the city of the amount required.

For construction, the Province contributes 40 per cent., and the county and city each 30 per cent.: for maintenance and repair the Province contributes 20 per cent., and the county and city divide the remainder equally between them.

The section of county road designated as "suburban" remains a county road for which the county is responsible: the work of construction and maintenance to be carried on under the county road superintendent, but subject to the instructions of the special commission.

XIX.

WHY CITIES SHOULD SHARE IN THE COST

Suburban roads, and assessment of cities for main road improvement, are recent features of Ontario legislation, and as they are new to most parts of the Province, the reasons for such requirements are of interest.

The development of main highways has, in every county, required the co-operation of cities. This has been true in countries of Europe, such as England, France and Belgium. In the United States, the city of Detroit is paying 85 per cent. of the cost of roads in Wayne County. Cleveland is paying $800,000 annually for road construction outside of the city. In New York, the cities are paying 85 per cent. of the State expenditure. In Massachusetts, cities pay 82 per cent. Similar conditions exist in other States.

In the case of cities in the United States, they are as a rule not separated from township and county organization, so that a considerable part of their expenditure on main roads is automatically arranged. In Ontario, however, with cities separated from township and county organization, it has been necessary to devise the system of suburban road contributions provided for in the Ontario Highways Act; in order that the existing municipal organization might not be disarranged.

Roads should be built and maintained in proportion to the traffic over them. Roads within two or three miles of a city may cost two or three times the ordinary expenditure of the county on roads, and this extra cost is difficult for the county to finance without co-operation from the city.

The object of a city's contribution would not be to relieve the county of the expenditure which they are now making, or which they may equitably be called upon to make, but rather to improve the standard of roads radiating from the city, and to permit them to be maintained in a condition suited to the traffic over them. Traffic accumulates to a considerable density on the main roads immediately adjacent to the city, and it becomes an unfair charge upon rural districts to construct and maintain roads suited to such accumulated traffic.

Thus the county with Provincial aid may be spending for ordinary roads $5,000 per mile; made up of $3,000 from the county and $2,000 from the Province. By calling upon the city to contribute equally with the county, the two provide $6,000, which entitles them to a provincial subsidy of $4,000. In this way, roads costing $10,000 (or $20,000) per mile become possible, to the very great advantage of the cities.

Municipal boundary lines are purely arbitrary and accidental. It cannot be maintained that the true interests and obligations of cities do not extend beyond their boundaries. That city councils are inclined to think of their interests as terminating with the city boundaries is purely a traditional attitude of mind, and in considering the advantages of good main roads, is without basis of fact. Good main roads are a means of rural development and are a source of local trade, as well as a convenience to city residents. The construction of main highways radiating from a city is so clearly of advantage to the city, that artificial boundary lines must necessarily be disregarded in providing equitably for the cost.

It has been suggested that the Province should contribute to the cost of continuing main roads through a city. But wealth is concentrated in cities. Cities in Ontario have an assessment of $1,033,117,544, and a population of 1,019,627; whereas townships have an assessment of $687,372,853 and a population of 1,021,220. With the comparatively small amount which cities are asked to pay to the construction of main roads radiating from them, it is believed that ample consideration is given to the construction of connecting links within the city, at the cost of the city.

A farm bears a somewhat similar relation to a public highway that the streets of a city bear to the system of county roads. The farmer is aided to build roads to the boundary of his farm, but not to construct lanes and driveways on his farm.

If a farm of 100 acres with a family residing on it, and distant 2 miles from a county road, is taxed for the construction of such a main road, it is only fair that a city comprising an area of 3,000 acres and containing a population of 25,000, with a valuation equal to 6,000 farms, should contribute to the cost of main roads radiating from it.

The building of expensive pavements within a city does not absolve the city from its obligations with respect to main roads in the open country. City pavements are not designed for traffic requirements only; but are expensive largely because of the advantages of curbing and good boulevards to adjacent property; the cost being reflected in increased property values. Comparing a $4,000 per mile road in the country with a city pavement costing $60,000 per mile, under ordinary conditions of land occupation in Ontario, with four farms per mile on each side of the road, the cost, if levied on a frontage basis, would be twice as great to the farmer as to the owner of a 40-ft. city lot.

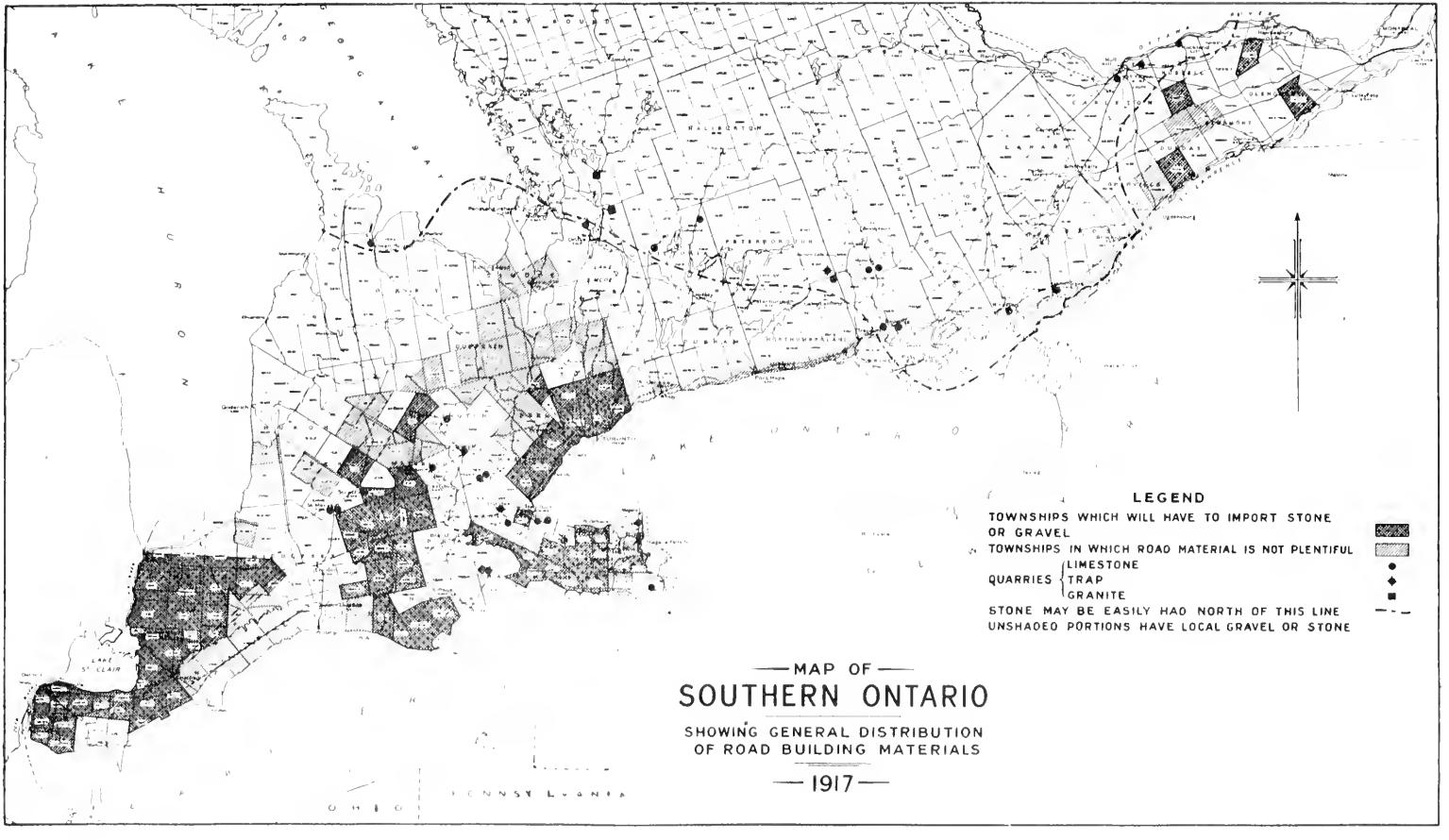
As a matter of self-interest, due to the benefits which good roads bring to a city, it is clearly a matter in which the cities of the Province should heartily co-operate with the Province. There is no industry which cities can bonus with so much advantage to themselves as farming. Good roads increase the produce, the saleable produce, from the farms, all of which adds to the prosperity and advantage of the city.

Under the systems of taxation in vogue in the States, a much larger proportion of the cost of main highways is met by the cities than is being considered in this Province. The maximum rate to be levied upon a city for these main arteries is restricted to one-half mill, and the county roads to be designated as "suburban" under the Act, would necessarily be restricted to such mileage as could be adequately improved with the expenditure becoming available through the combined contributions of the city, county and Province.

The mileage of radiating roads to which each city should contribute will depend somewhat on local conditions. Consideration may be given to the local trade traffic entering the city; or to points of local interest close to the city; or to an area approximately that required to supply the city with local farm produce. It is estimated that one square mile, as commonly farmed in Ontario, will support a population of about 300 persons; from which the radius of the supporting area may be estimated. Broadly, it would appear feasible to require the smaller cities to give proportionate support to about 6 miles of road for each mile of radius of supporting area; or on another basis, two miles to each million of assessment.

The Ontario Highways Act came into effect in January, 1916, and there is some negotiation to be carried out in order to effect organization in all cases.

The counties in which suburban roads have been settled are:—York, in which Toronto contributes to the entire county road system, with a special grant of $250,000 to the Toronto Hamilton Highway; Frontenac, in which Kingston contributes to approximately 60 miles of road; Waterloo, in which Galt contributes to 25 miles, and Kitchener to 12 miles; Essex, in which Walkerville has contributed to about 8 miles, and Windsor, with which negotiations are now in progress. Hamilton has contributed $50,000 to the Toronto-Hamilton Highway, and negotiations are in progress with the county with respect to other suburban roads.


LEGEND
TOWNSHIPS WHICH WILL HAVE TO IMPORT STONE OR GRAVEL
TOWNSHIPS IN WHICH ROAD MATERIAL IS NOT PLENTIFUL
QUARRIES
LIMESTONE
TRAP
GRANITE
STONE MAY BE EASILY HAD NORTH OF THIS LINE
UNSHADED PORTIONS HAVE LOCAL GRAVEL OR STONE
MAP OF
SOUTHERN ONTARIO
SHOWING GENERAL DISTRIBUTION
OF ROAD BUILDING MATERIALS
1917
HALIBURTON
PETERBOROUGH
LAKE ONTARIO
LAKE ST. CLAIR
OHIO
PENNSYLVANIA

PROCEEDINGS

OF THE

Fifteenth Annual Meeting

OF THE

Ontario Good Roads Association

1917

Appended to the Annual Report of the Deputy Minister of Highways

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

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Printed and Published by A. T. WILGRESS, Printer to the King's Most Excellent Majesty

1917

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OF THE

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To the HONOURABLE F. G. MACDIARMID,

Minister of Public Works and Highways, Ontario.

SIR,—I have the honour to transmit, for publication as an appendix to the Annual Report of this Department, the proceedings of the Fifteenth Annual Meeting of the Ontario Good Roads Association, held in the York County Council Chambers, Toronto, on Tuesday, Wednesday and Thursday, February 27th, 28th and March 1st, 1917.

I have the honour to be,

Sir,

Your obedient servant,

W. A. MCLEAN,

Deputy Minister of Highways.

Parliament Buildings, Toronto.
May 1, 1917.

Report

OF THE

Fifteenth Annual Meeting

OF THE

Ontario Good Roads Association

FIRST SESSION

Tuesday Morning, February 27th, 1917

The President, S. L. SQUIRE, in the Chair.

REPORT OF EXECUTIVE COMMITTEE

Mr. President and Gentlemen: In presenting the executive report of the Ontario Good Roads Association for 1916, I do so with the feeling that the cause of Highway Improvement has made much progress during the year, and that the work of this Association, while always accomplishing much good, is now bearing much abundant fruit. The public of the Province now desire to know what is the matter with the few counties outside the system.

The executive held four meetings since last convention: three being held in Toronto and one in the City of Belleville.

The first meeting was held immediately following the last convention. Mr. C. R. Wheelock, our Vice-President, was appointed a delegate to the Road Congress at Pittsburgh, while past President Sanderson and President Squire were delegated to the Montreal Convention. The President and Secretary were delegated to present the resolutions of our convention to the Minister of Highways, Hon. F. G. Macdiarmid.

The next meeting was held on May 18th at Toronto. At this meeting the President, Mr. S. L. Squire, was authorized to correspond with Mr. Thomas Adams of the Conservation Commission, and Mr. Duchastel, regarding the Dominion Highway Association.

The President was also authorized to continue the educational campaign in the various counties. It was also decided to undertake a newspaper publicity campaign under the supervision of Mr. K. W. McKay, of St. Thomas.

Our next executive meeting was held in Belleville on the 6th of June. That session the executive accepted the invitation of the Counties of Hastings and Prince Edward to hold a meeting in Belleville as the executive had done in 1915 in St. Thomas. After discussing the general highway improvement outlook and

empowering the President to continue his energetic campaign, the executive suggested several road problems which will be submitted for the consideration of this convention. Following the meeting the executive spent two days visiting the different sections of these two counties, receiving inspiration from the highways they travelled over and the evident prosperity that was everywhere apparent in these two grand old counties.

The members were royally entertained, both to banquets in Belleville, and to wind up, our most enjoyable visit to the Town of Picton.

The fourth meeting was held in November last to complete arrangements for this Convention.

Moved by Mr. McKay, and seconded by Mr. G. M. Cloud, that the report of the Executive Committee be received and adopted. Carried.

THE CHAIRMAN: On behalf of the Executive, I desire to welcome all those who are present. We are glad to note the number of old friends who are with us, and we are pleased to see so many new faces. We are glad to see the cities represented. We find that the question of good roads is not only vital to the people of the country, but more and more the cities and towns realize that it is important to have good roads leading out into the country.

We will present to you at this Convention a programme that will be interesting and of great profit. We have found that the representatives from the different counties are not, as a rule, interested in technical questions as to road building, but that they want to discuss and hear discussed practical questions pertaining to the building and maintaining of good roads. We have, therefore, tried to keep these questions before you as much as possible. I hope you will feel perfectly free to present any resolution, or bring before the convention any subject that you feel is important and for the benefit of the community at large. This Convention is for the purpose of discussion and deliberation, and we will allow plenty of time for discussion of each paper that is presented.

I think it would be out of place if we did not at this time mention some of those who have been called to their long home during the past year. During the past year we have lost more of our valued workers than at any other time. The first to be called was Mr. Bowman, Clerk of the County of Waterloo. Mr. Bowman was connected with the Association for a long time, and year after year took part in the discussions and was always loyal to the best interest of the Association. The next to be called away to the great beyond was Major Sheppard. He was one of the founders of Confederation. He was one of the first men to interest himself in the question of highway improvement in the Province of Ontario, and he was always to be found at this Convention. Last year he moved a congratulatory resolution in connection with our friend and Past President, Major Kennedy, who at that time was at the front. The next to leave us was Mr. Chapman, from Hastings County. He was one of the newer men, but he always took an active interest in the work of the Association. Only last week Mr. Beam, who was possibly the Dean of this Association, passed away. Year after year he came to our meetings and was always very much interested in the progress that was made towards securing good roads for the Province. We, as an Association, have lost these splendid men. I am glad to know that there are so many new faces who will perhaps be able to step in and take the places of those who have gone.

Meeting adjourned.

SECOND SESSION

Tuesday Afternoon, February 27th, 1917

The President, S. L. SQUIRE, in the Chair.

HIGHWAYS OF EASTERN STATES

Mr. L. E. Allen, Belleville

Mr. Chairman and Gentlemen: Were it not for the fact that Hastings County had the privilege last summer, in conjunction with Prince Edward County of entertaining the members of the Executive of the Ontario Good Roads Association for two or three days, showing them the good roads of Prince Edward and Hastings Counties, perhaps I would not be here. We have some good road spirits in that portion of Ontario who can keep up with any good road movement that this Province can put up. The Executive requested me to prepare a paper on some of the good roads of the Eastern States in their relation to the development of good roads in the Province of Ontario. It was my good fortune some years ago to examine the good roads of Europe, and the paper which I will present to you this afternoon is the result of observations I have made in Europe and the Eastern States.

A comparative study of the good roads question as affecting our own requirements in the Province of Ontario, may well include some observations as to the good road movement in some of the states adjacent to or in close proximity to our Province.

The conditions of climate, soil, population, character of traffic, etc., in some of the Eastern States are more nearly analogous to those existing in the Province of Ontario, than any other portions of this continent, and more especially than those of Great Britain. In the States of New York, New Jersey and Pennsylvania and some of the New England States, there exist similar varying conditions of climate—cold winters and hot summers; all the varying classes of soil from clay to sand; densely populated sections and sections sparsely settled with correspondingly light traffic requirements, so that a careful study of the good roads development in those states should lead, perhaps, to information of value to those interested in the continued improvement of our Provincial highways.

NEW YORK

The highways of the State of New York are perhaps, on account of their touching Ontario on both the eastern and western extremities of Lake Ontario, more familiar to this Province than any of the other Eastern States, and for this reason, first mention will be given to the State of New York. The topography of the State, as well as its geological formation, is quite similar in many respects to that of Ontario, ranging from sandy plains similar to the Western portion of Ontario to extremely hilly country such as is found in the eastern and more northerly portions of Ontario. The population, according to the 1910 census, of a total of over 9,000,000 was distributed as follows: New York City, 4,766,883, or 52.3 per cent.; cities and towns, 7,185,494, or 78.8 per cent. It is, therefore, quite obvious that in the development of the New York State good roads movement which started about the year 1898, the large proportion of its population residing in cities and towns, has had a distinct effect in determining the policy of the good roads development within the State. Under the first good roads law enacted, 50

per cent. of the cost of highways was borne by the State, 35 per cent. by the counties and 15 per cent. by the towns through which the roads passed. On completion, the roads were maintained under state supervision at the expense of the town. It was found that this system was defective inasmuch as the degree of maintenance of the different highways depended to a large extent on the wealth of the particular town or district as well as the efficiency of the town officials.

In 1913 the system was changed, a reorganization of the State Highway Department being effected, which system is at present in force. The State Commissioner of Highways, who is appointed by the Governor for a term of five years, has general supervision of all highways and bridges within the state that are constructed, improved or maintained wholly or in part by the funds of the state. The state is divided into nine divisions, each division under a division engineer, who is in direct charge of all construction or maintenance road work under the Department of Highways. There are two funds provided for highway work, one held by the State Treasurer, the other deposited with the various counties, the former fund is obtained by the sale of highway improvement bonds, the latter is appropriated directly from the revenues of the State.

The State highways are divided into four groups, of which brief mention will be made:

1.—State Highways

All highways classified as State Highways are those built at the entire expense of the state. They are laid out and built in well defined routes to serve and connect the most populous portions of the state. The mileage at present is about 3,800 miles divided into 45 routes as specified by the state legislature. The original cost of construction is entirely borne by the state, but their maintenance is paid for by both the state and the towns through which they pass. Those highways are considered to be of the highest class of construction and receive in most cases heavy traffic, especially motor traffic.

2.—County Highways

The so called County Highways are constructed at the joint expense of the state and counties. They correspond in most respects to what are termed in our Province, main market roads. They constitute at present 8,380 miles of the State highways system. Maintenance is borne in a similar manner as for State Highways, jointly by the State and counties.

3.—County Roads

The County Roads are built at the sole expense of the counties, and are under the direct jurisdiction of the counties. Although the county provides the entire funds to construct its County Roads, the State assists in their maintenance, to an amount equal to approximately 50 per cent. of the county's appropriation for the previous year. This State aid is limited, however, to an amount not exceeding one-tenth of one per cent. of the county's taxable property for any one year.

4.—Town Highways

Such highways as are all outside of incorporated villages and cities which do not belong to either the State or County System or to the County Road System, are included under and termed Town Highways. They are constructed and maintained jointly by a State and Township fund. Any township desiring State aid

for Township Roads must make a tax levy for such an amount that added to the State's contribution will be equal to not less than $30 per mile. Townships which are more sparsely settled and have a taxable valuation of less than $3,750 per mile, may still receive State aid based on a requirement of $4 per thousand of assessed valuation. The whole is graduated and regulated on a basis of the wealth per mile in the township. There are at present some 73,000 miles of Township Highways in the State that are receiving State aid and State supervision, of which 9,000 miles are constructed of heavy gravel or macadam and they are being constructed at the rate of about 800 miles per year. It is estimated that seven-tenths of the agricultural products of the State are transported over these roads.

PENNSYLVANIA

The State of Pennsylvania, like New York State, is a very populous State, ranking second in population, much of its population, however, being concentrated in large cities. It early developed a well organized State Highway Department, along somewhat similar lines to that of New York State.

There are at present 375 main highway routes or highways covering over 10,000 miles which are designated as State Highways. All highways coming under State control are constructed at least 12 feet in width. No telegraph, telephone, electric light or power poles can be erected on State highways without special permission from the Highway Department.

The State also grants aid to counties and townships upon application and on compliance with certain prescribed conditions equal to 50 per cent. of construction, and also for maintenance. The basis of State aid depends on the mileage of the highways in counties or townships, the State contributing 50 per cent. and the county or township 50 per cent. for maintenance. The revenues derived from motor licenses are entirely applied to highway improvement. It may be of interest to note that the increase in expenditures on highways in Pennsylvania from 1904 to 1914 was 113.2 per cent. Of a total road mileage in the State of 91,555 miles, there are 1,881 miles of macadam; 198 miles of bituminous macadam; 269 miles of brick, 235 miles of gravel, and 357 miles of other materials such as concrete, stone, etc., the balance being ordinary country clay or sand roads.

RHODE ISLAND

The State of Rhode Island, the smallest in area of the States, and smaller than many of our counties in Ontario, commenced a definite good roads policy in the year 1892. The State Road System is at present in the hands of a Board of Public Roads, consisting of five members, each serving five years. The Board have charge of the construction and maintenance of all State highways and bridges. Only such highways as are adopted and improved or reconstructed by the State Board are considered State roads. There are at present 325 miles of State road of which 89 miles are bituminous macadam, the balance being surface-treated water bound macadam. All construction work is done under the contract system, and maintenance is largely carried out by the "Patrol System." No convict labor is used in highway work within the State.

NEW JERSEY

The first State in the Union to adopt a policy of State aid was the State of New Jersey, the first work under the system being started in 1892. As it is one of the most densely populated and, in consequence, one of the wealthiest per square

mile of area, it requires a very extensive system of inter-connecting highways throughout the State. The cost of reconstructing the highway system has been high, owing to the necessity of straightening and reducing grades on many of the main highways which originally, in many cases, followed the old Indian trails. For the size of the State its roads are probably more extensively used for motor traffic than any other State. In 1914, according to State registration, there was an average of one automobile for every 40 of population, and 6 automobiles for every mile of road.

Sand-clay roads are constructed of gravel, engine cinders, etc., and cost about $1,000 per mile for grading, and $1,000 for surfacing, or a total of $2,000 per mile. The average width is from 12 to 14 feet.

Gravel roads cost from $2,500 to $10,000 per mile, and range from 14 to 40 feet in width.

Macadam roads are usually over 12 feet in width and cost from $5,000 to $20,000 per mile to construct. It is estimated that the total cost of roads in New Jersey will approximate $140,000,000.

The highway system is largely centralized in a State Highway Department, the State giving aid to both new construction and maintenance.

From the few brief facts which have been submitted, it is apparent that the tendency in the States mentioned is towards increased aid, coupled with greater and more rigid supervision and inspection of all classes of public roads. The large revenues derived from motor traffic, which will necessarily increase from year to year, supplemented with funds from the State and from those directly benefited by improved roads, should help to solve the good roads question, a question which will be solved all the sooner by the greatest possible education of road users to the benefits to be derived from Good Roads in any country.

ADDRESS OF WELCOME

T. L. Church, K.C., Mayor of the City of Toronto

Mr. Chairman and Gentlemen: I am glad, on behalf of my colleagues, the men who govern the City of Toronto, to give you a right royal welcome to the capital of the Province of Ontario. You are engaged in an important work. The value of Good Roads is known all over the world. I am sorry to say that Ontario has not been in the front rank in this matter; although I am glad to say that this Association has done good work during the past five or ten years. The work is three fold; there is work for the Dominion Government and for the Provincial Government, and also for the municipalities. When we consider what has been done in England and France and other old countries, and in the United States, we must admit that our Governments on both sides of politics, since Confederation, have not given the matter of good roads due consideration. The advantage of good roads is equal to the farmer and the man who lives in the city. One of the main reasons for under production in the Province of Ontario is the lack of trunk lines and good roads leading to them throughout the whole Province. (Applause.) The City of Toronto has been a pioneer in this direction. The citizens of Toronto, not being satisfied with being heavily taxed for their own roads, and we have roads in Toronto that are second to none in the world, have contributed towards roads leading to the City. People who come to Toronto to attend the numerous conventions that

assemble in this City, admire the system of highways that we have. Up to a few years ago the main roads leading into the City of Toronto from the north, east and west were poor roads, fourth or fifth class highways. Some ten years ago the City of Toronto entered into an arrangement by which they contributed a large sum of money to improve the highways within fifteen miles of the City. A commission was appointed which was known as The York County Highway Commission. That Commission has almost completed its work. The City of Toronto also went into the scheme to build a good road between Toronto and Hamilton. While that highway was not properly thought out at the time, and had no route map, and has been built too narrow, yet the City of Toronto contributed some $10,000 per mile; over $400,000. That is another example of what Toronto has been doing to help along the development of good roads in the Province. Some five years ago, as President of the Union of Canadian Municipalities, I had charge of the Bill known as the Federal Highway Bill. Mr. Rogers had the Bill put through the House of Commons, but the Senate threw out the Bill. The passing of that law was necessary in the time of peace, and it is still more necessary in time of war. After the war is over the building of roads will be a great means of solving the problem of the unemployed. We have been promised that this Bill will be reintroduced in the House of Commons, and when it is passed we will have the support of the Dominion Government in the construction of a main highway through Ontario.

I congratulate this Association on the good work you have accomplished in the past. You have an able and energetic secretary in Mr. G. S. Henry, M.P.P., and your President is full of enthusiasm, and the rest of the members are all good workers.

The Province of Ontario has at last come to life on this subject. The present Government have a very ambitious scheme, and I hope and trust they will keep it up and not allow the financial situation to interfere with the good work. Good roads are not a luxury, they are a necessity. Ontario is twenty-five years behind the times in the matter of good roads and I hope the Government will have the courage to move forward in this work.

I am glad to see that the Minister has announced a forward policy in this connection. If you can only get the Federal Government to act you will have accomplished something that you have been looking forward to for a great many years.

The City of Toronto has been doing a great deal of work that should have been done by the Provincial and the Federal Governments. The Toronto-Hamilton Highway is part and parcel of the Federal Highway from Montreal to Windsor, and this road is being built by the City assisted by the Province. I hope after the Federal legislation has been introduced that they will see that the municipalities that have been enterprising enough to go into this proposition without waiting for the Federal authorities to take action, will receive some compensation for the work they have done.

I wish you every success in the good work you are doing. You have accomplished a great deal in educating the people as to the value of good roads. You have always had a good friend in the City of Toronto, and if there is anything we can do to forward the work of this Association I hope you will let us know.

I hope before the year is over that a glorious peace will be brought about by victory, and that Prussian militarism will be destroyed for ever, and we will have peace for all time to come.

The Province of Ontario has led all the other provinces in contributions of men and money, and after the war is over Ontario will come into its own.

PRESIDENT'S ADDRESS

S. L. Squire, Waterford

As evidenced in to-days convention, more and more is the necessity of the deliberation on public and private questions recognized; conventions are multiplied and yearly there are added to the already long list many new associations and gatherings to consider questions which are of importance to each. I believe that I am right in saying that among all the associations held there is none which is more important than the Association under whose auspices we are now meeting. The question of highways is in a class by itself, it recognizes no competition and admits none. Because like the poor we have always had the roadways with us, but we have sometimes overlooked the importance of their development, and have conceded at times that other public questions should receive priority. In so doing we have discovered that in the development of a better organized society there is a hub, a centre around which all other questions turn, and that centre is the highways of the nation. Let a section of the country become intensively farmed and have one acre produce what ten has previously produced, and what is the first demand? Improvement of highways. Let the centre of population feel the pinch of a limited production, and what is the insistent demand? Is it not that the highways be improved in order that a cheaper distribution of the product be made possible? Now when time is becoming a factor in life, when a nation's orders are "Economize and speed up," the highway is placed in an increasingly prominent position. The economy of a nation is an interwoven fabric intricate and interdependent. A forward step is no sooner taken than a new demand is made or an old demand revived. The steam road, the electric road, the motor truck and the automobile have not decreased the need of roads, but have made the need of improved highways more apparent The steam road has opened new sections of a country, but depends for its success upon the ease and cheapness with which the tonnage of the country can be delivered to its rails. What is true of the steam road is equally true of the electric road—their existence increases the necessity of improved highways.

The growing number of automobiles and motor trucks promises in the near future a splendid contribution to the breakfast table of our growing urban municipalities, not only in cheapening the cost, but in making deliveries while yet the dew of the morning is on the fresh pulled vegetables and before the bloom has faded from the early picked fruit. This can be done provided only that the highways are in such a state as to make such deliveries possible. Now where rests the responsibility for such improvement? The streets and roadways have always been the property of the municipality, and the municipalities would view with suspicion any drastic measure which would remove from their control that which time and experience has taught them to think upon as their own. Our highways are not generally considered as the "King's." The world moves fast. To-day as never before we are considering that what we have and are is in a great measure the property of the state to use and to develop. With these apparently contradictory views we have to evolve that which will produce a new condition of affairs. Is it not possible to think of the highway as something which may perform a function, which is national, provincial and local? and performing such function it is not difficult to see and conceive a joint responsibility for their improvement. While to a great extent the roads were and are used as local institutions, some of them are becoming inter-county, inter-provincial and even international in their scope. With the present condition of traffic it is unfair to view all the roads as being of equal importance, or to suppose that the expense of construction and maintenance should be borne by the

people assessed under a system so apparently unfair as the statute labor system, however well this system may be operated. It was to relieve, in a measure, the extra expense and burden of constructing and maintaining the roads which bear a large percentage of through traffic that county organization and provincial assistance has been given. That the roads are the especial care of the municipality no one questions. That many mistakes have been made in their administration, no one denies. That traffic conditions make for recreation, all admit.

Now how can we arrange for an administration which will at once make for a satisfactory distribution of responsibility and not cause a wasteful overlapping? It is evident that it is not a government's business to rudely snatch from the municipality that which time and precedent has placed in its hands, even though such business has at times been wastefully handled. It is the government's business to assist and encourage, educate and standardize the work of the municipalities, that ideals may be sought and attained which would otherwise have been impossible.

The government should do all the experimenting for the municipalities along the line of road building and should be in a position to suggest ways, means and materials, suitable for every condition. The work of the Agricultural College does for the farmer by way of experiment, research and suggestion, just what the Good Roads Department should do for the municipality in connection with its highways. Every large institution to-day has its department of research. As an illustration. The A. T. & A., the parent company controlling the Bell Telephone Company of America, has spent millions in its laboratories testing, balancing and arranging the transmission of speech, employing expert men who would not be available for smaller institutions. The result of such experimenting to-day enables men to speak across the continent. The benefits are in a measure enjoyed by the smallest companies of Canada. Is it not ridiculous and unnecessary to have the municipalities experimenting in street and road construction? The waste from such experimenting has cost millions of dollars and often has led nowhere. Would it not make for increased efficiency if the Government should carry on research and experiment work and be able to suggest the mode and manner best suited for each condition? Toronto and other cities may be making the same experiment at the same time; all may prove failures and great loss ensue.

There are some roads which from their position make them national or provincial roads. These should be the especial care of the Government.

A question which is attracting Dominion wide attention is the care of returned soldiers. We were not prepared for war and that proved a calamity. If we are not prepared for peace that will be criminal. Whose business will it be to find suitable employment for those brave fellows who have been our substitutes? There may be some side stepping of responsibility. But after all is this not the business of all and can we not conceive of a splendid co-operation of federal, provincial and municipal authorities, linked together in an effort to provide for the employment? Can we conceive of any field which will afford a better scope for co-operation than the improvement of highways?

At Niagara Falls in connection with the electric development they have what are called spillways, that regulate the water pressure. The municipalities should be the labour spillways and should be in a position to furnish employment when industrial and private owned corporations are counselling caution. Some people tell you that the soldiers who return will not want to work on road building and will not be suitable for that work. This will be true as to many. But I am sure that we all agree that ten per cent. of the men will be available, and that perhaps as

many more will be out of employment during the period of readjustment, that will mean that 80,000 men will be looking for work; 40,000 of them in Ontario. The present is a good time to plan for giving work to these men on the highways of this Province. There is an old Athenian adage which says: "If you would have good citizens, place that which is most beautiful in the ears of your sons," meaning of course, jewels of thought. If we are to have good roads the state must place before us that which makes for the highest ideal in roadmaking and the municipalities will not be slow in following.

In conclusion, permit me to say that we are following in the march of progress, and as good roads led everywhere in the beginning of the Christian Era marking the coming of the Man, Christ Jesus, so I am inclined to think that the result of the present agitation and the completion of the improved roadways throughout this Canada of ours will mark the birth of a new Democracy, when men purged by the fires of the great world conflict will rise to lead a nation whose ideals of citizenship will be the standards of a new world. (Applause.)

MR. F. A. SENECAL: During the past year four of our most active members have passed to the world beyond. I am a French-Canadian, and it is not very often that you see a French-Canadian in Toronto. (Applause). If we were to believe what we read in the papers we would think it would not be possible for a French-Canadian to visit Toronto. (Laughter.) Fortunately these reports are more or less exaggerated. They are the outcome of certain firebrands that we have on both sides. I take pleasure in giving you the greetings of the French-Canadian people of this Province of Ontario. (Applause.)

I rise for the purpose of suggesting that the President name a committee of three or five members for the purpose of drafting a resolution of condolence.

We must remember that our forefathers, after being enemies for three hundred years, have now had one hundred years of peace, and to-day they are fighting together in the same trenches for the greatest cause that has ever been fought for in this world. (Applause.) I expect that we will understand each other better after this war. One way of bringing about a better understanding is by making communication more easy between Quebec and Ontario. That is one of the duties of the Ontario Good Roads Association.

MR. ALLAN: I think our friend Mr. Senecal has expressed the feeling of this Association, and I have pleasure in seconding the motion. Motion carried.

THE CHAIRMAN: I will appoint on that committee Messrs. Senecal, Chairman; Major Kennedy and Mr. J. J. Parsons.

THE CHAIRMAN: A short time ago I saw the face of Mr. McLean, the Deputy Minister of Highways, in the audience, and I am sure you would all like to have a few words from him at this time. He does not need an introduction to you because you all know him so well. He will be able to tell you why things have not happened, and he is the man before whom you will lay your plans in the future.

ADDRESS

W. A. McLean, Deputy Minister of Highways

Mr. Chairman and Gentlemen: That is a task that I do not believe I want to undertake—to tell you "why things have not happened." There is a great deal to happen in Ontario in connection with highway improvement in the Province. The splendid audience here this afternoon is evidence that the municipal councils of the Province are thoroughly in touch with the question. I have attended Good Roads Conventions in Toronto for the past twenty years, and do not think I have ever seen an attendance equal to the present at the opening session. That fact appeals to me as most favourable to the future of the good roads situation in Ontario.

I did not expect to be called upon when I stepped into the back of the room this afternoon, but I saw a chance to get away from my office, and thought I would come to your meeting and hear some of the proceedings.

The good roads situation in Ontario is making excellent progress. When the mind of the people is set in a certain channel, it is exceedingly hard to turn it out of that course. For over one hundred years the people of Ontario have been maintaining their highways through township organization almost solely, and at the outset it was a great big undertaking to turn the popular mind from purely township organization to something broader, into a county organization or provincial organization. When the county road system was inaugurated by the special Act of 1901, there were only one or two county road systems in Ontario. At the present time twenty-four out of the thirty-seven counties in Ontario have established the county roads system, and there are others that are on the turning point. I expect that Victoria will swing in line in a few weeks, leaving only twelve counties in Ontario which have not established the county road system. So that the end of our task of educating the public to the advantages of the County Roads System is apparently approaching completion; but that is only the initiation of our greater task.

When the people are prepared to accept the county roads system, there is still the task of perfecting and completing the organization. I do not know of any scheme of organization that is absolutely perfect or that operates without some friction. If you are going to have vitality in any kind of organization you have to be continually putting vitality into it. Therefore, if you wish to get success from your county roads system, I do not know of any stage at which you can stop and say, "We can now lay on our oars and let it go on without effort on our part." If we want good highways in Ontario we must give constant and earnest effort to the organization and to the construction and maintaining of the highways.

Our Department has been turning its eyes to the future, as the President in his address has intimated, because when he told us that we should have a department or an officer in charge of experimental construction and an office for that purpose, I am pleased to tell him that we have already initiated that department. (Applause.) But that office can only do a certain amount of testing and examining, because after all, the real test of any type of construction or material is in actual experience under traffic. We may form our ideas and our conclusions, but no chemical department can tell us with any degree of certainty what the real results from any material or type of construction will be under traffic on the roads.

We are prepared to carry on research and to assist in every way. It is urgent that something of this kind should be undertaken because of the great change in traffic. The highways of to-day are subject to a traffic that was not thought of when macadam construction was first put down. Such roads are still being built

in, I suppose, ninety-five per cent. of the cases in which construction has been carried on; but there are main highways that cannot be served by the old types of surface, and we have to find some means of construction so that they will carry the new traffic.

What is this new traffic—the automobile traffic? It is a traffic which is increasing the value of our highways many fold. With horse-drawn traffic one can travel only limited distances, and the load we can carry is restricted; but with the automobile and the automobile truck, the distance you can travel in comfort and carry a substantial load depends not on the horse, but depends rather on the state of the road. The farmer residing in the north end of Bruce County, starting out with a small car, can come in comfort and in pleasure to Toronto. That was unheard of until very recently. It was something that we could not believe possible ten years ago. I think it is only seven or eight years ago that I heard a man in this hall say, "Do you mean to tell me that the farmer can afford to own an automobile?" He answered himself with a most emphatic "No." That condition has changed; there are approximately 12,000 farmers in Ontario owning cars, and they have only started. The cars up to the present time are owned chiefly in the towns and cities.

I am often asked why we should not return the fees for automobile licenses to the municipalities from which they come. There are several reasons. One is that the use of the car is not confined to the municipality in which it is owned. There is not any such restriction. It travels far and wide. Cars owned in Toronto are not restricted to the streets of Toronto nor to the highways of the County of York; they are seen all over Ontario, and so it is with the cars of other towns and cities. Their use is not confined to the municipality in which they are owned. Is it fair that we should return to the City of Toronto the fees that are paid in by men who reside in the City of Toronto and own cars? Go a little further: Is it fair that we should return the fees for the 10,000 cars owned in Toronto to the city and to the County of York? They are not confined to the County of York. They are used all over Ontario.

In view of this situation, the Province, as other countries have done, has determined that a tax should be placed on cars for the purpose of distributing the expenditure over the roads of the Province. If we make any territorial restrictions, we will get into situations that will be unfair. It is wholly in the interest of the township that the fees from autos should be spent as they are at the present time. Therefore, a system that will produce good highways in the townships through the County Road System, and will distribute as a percentage what that county will spend, seems the fairer way.

The other day I was asked if I should not return the fees to a certain county. I turned up the figures and found that if that county would apply in taxes one and a half mills, they would create an annual fund of $42,000, earning a provincial subsidy of $28,000; but if we returned to that county simply the fees that were paid in for automobile taxes (without any deduction for the cost of administration), the county would only have received $8,000. That is how the farmers in the townships are receiving service through the system which we have applied for distributing this fund. So that I answer, if we undertake to distribute it on any territorial or other similar basis, it will not be distributed as it ought to be and would be distributed wholly in the interest of a few municipalities that have important cities in their midst: and more particularly in the case of the County of York. I do not know of a single county in Ontario which should ask to have the fees returned to it

except the County of York, and they are not asking it so far as I have learned, as they no doubt recognize the inequality.

We are entering upon a new era of construction in Ontario. I have always held that there should be three classes of highways, under the township, the county, and the province; and that the provincial grants should be such that the cost of county and provincial highways to each municipality through which they pass will be somewhat the same as the cost of a good township road. As you are aware, the Province has announced that an Act will be brought in at the present session which will provide for the construction of provincial highways. When these highways are constructed, we will, in Ontario, have a system of good roads which will equal anything on this continent. (Applause.) The counties and the townships up to the present time have been earnestly dealing with this question in Ontario. I have only praise for the earnestness of townships in seeking to improve their highways, and they have accomplished a great deal. The counties have taken up the work in a substantial way. The Province only—and it is an exception perhaps on the Continent—has been behind in the construction of improved highways because we have felt that our first effort should be to help the counties in constructing their market roads. We have now reached the stage in which the counties are pretty well organized, and I believe the time is opportune, more especially with a view to after-war conditions, that great trunk highways should be considered as in other provinces and in the States to the south of us.

It is sometimes said that the roads of Ontario are poor; they are not the best of roads; and yet over 40 per cent. of the roads of Ontario have received some kind of surface improvement. I know of only a single state on this Continent that can make any such a showing, and that is the State of Indiana. I do not know of any single state which can show such a percentage of highways that have received attention and have been surfaced as ours have in Ontario. So that with the county roads which have been constructed and which are in process of construction, and a few connecting Provincial highways of Ontario, we will be able to show something that is not exceeded anywhere on the Continent. I believe that we have started at the proper end—the townships. We have gone up through the county, and all we now require is the important arteries to join up these County Roads Systems, and we will be able to drive throughout Ontario on fairly good roads, such as no other similar area on this Continent has yet been able to construct.

I will not go into the particulars of the Highway Bill this afternoon. That will all be placed before you by others, I have no doubt, and I would not care to trespass on your time.

The counties of Ontario are making splendid progress. As I have said, twenty-five have established County Systems. There are only twelve to be seriously won over. These are at the turning point, and I believe we can safely proceed with the full confidence that they will join in the near future and help us to make the system of highways throughout Ontario what it ought to be.

To-day highway construction is retarded by the heavy responsibilities that are placed on us because of the war. I would not at this time urge any extensive scheme of construction by any county, but I do believe that every county would fail in its duty to itself and to the soldiers overseas, if they failed to seriously consider county organization. We have expected men to go overseas to fight for us. They have gone; they are doing their duty as we all know, and more than their duty in some cases; but while they are fighting for us and doing their duty, it is for us at home to see that we do ours, and are prepared for their return and prepared

adequately, so that while they have been accomplishing their task, we at home have performed ours.

MR. BRENNAN, Renfrew: At the last session of our County Council we decided to become members of your Good Roads Association, and I was sent here as a delegate from Renfrew County Council. Mr. McLean, the Deputy Minister, has just stated there were twenty-four out of the thirty-seven in the Good Roads System, and one more, Victoria, was about to come in. He can put the County of Renfrew also on his list, because we are going to come in. (Applause.)

THIRD SESSION

Wednesday Morning, February 28th, 1917

The President, S. L. SQUIRE, in the Chair.

"REDUCING CONSTRUCTION COSTS BY INCREASED EFFICIENCY"

By Mr. W. Huber, Assistant Engineer, Department of Public Highways

Mr. Chairman and Gentlemen: A prominent contractor once stated that he formulated a rule for estimating the cost of a given piece of work in the following way: He carefully calculated the separate cost of material and labour and the overhead cost, added them together, multiplied by two and added all his conscience would allow him to, and then submitted his tender. In these days of civilization and enlightenment and competition, we require something a little more accurate than that in the work of estimating the cost. There has recently sprung up an entirely new business known as Efficiency Engineering. The object of this business is to carefully analyze a given industry—analyze each operation and each movement, and see how the cost of that operation can be reduced. The Efficiency Engineer will start on an industry or a factory and he will carefully consider, first of all, the handling of the material, and he will see that that material makes no unnecessary movement. He will analyze each operation and divide each operation into a number of parts, and carefully consider whether the cost of the operation cannot be reduced in some way.

In the preparation of the paper which I propose to read to you this morning, I have made a few notes and will attempt to apply the principle of efficiency engineering to road construction, and see if it is possible to adopt certain rules so as to enable the municipalities to reduce the cost of road construction.

The cost of road construction is influenced by numerous factors, the majority of which are beyond the control of those responsible for its execution. These uncontrolable factors include traffic conditions, quality of available material, length of haul, freight rates, condition of the road prior to construction, condition of the labour market, etc., and the municipality is compelled to meet existing conditions as best it can. There is on the other hand, one factor which will affect to a very large degree the final cost of the work, viz.: the efficiency with which the various operations are carried out. In the consideration of this factor, the personal element will be found to play an important part, and the conclusion will be inevitably reached that efficiency in operation is almost entirely the result of the personal qualifications of those directing the work.

Efficiency as used in the mechanical sense is defined as the ratio of effect produced to the energy expended. Or, adapted to road construction, efficiency may be termed the ratio of actual road value received to the expenditure made. A more popular conception of the idea of efficiency is the elimination or reduction of waste, either of material or labour, and the consequent lowering of costs. With either of those definitions in mind the statement that the efficiency of various organizations varies between very wide limits is easily understood, since, under practically identical conditions, different men will produce greatly varying amounts of work with the same effort, or conversely, different men will produce the same results at widely differing costs. It is the object of this paper to discuss very briefly some of the principles relating to the work of road construction by which the same results may

be obtained with less expenditure of money on the part of the corporation and of energy on the part of the workmen, or on the other hand, how the same expenditure may be made to produce greater or better results.

First of all, the cost of a season's work may be kept down by careful planning. The year's operations must be so arranged that the cost of moving the outfits is kept as low as possible. The number of moves made during the season must also be reduced to a minimum. Work should be planned far enough in advance to permit the operations of each season to form part of a definite programme of road improvement extending over a number of years. One of the greatest obstacles to the efficient carrying out of a programme of highway improvement is the policy often encountered of endeavoring, with a limited equipment, frequently one or two outfits, to do each year at least one piece of work in each section of the county. This necessitates frequent moving and short disconnected stretches with attendant high costs, and too often constitutes a system which is little better than patchwork. With such a system it is impossible to arouse the enthusiasm of the county to a suitable degree, and much of the interest taken in the early operation of the road system may be dropped. Frequent shifting and semi-repair work entail extra costs, and result in the indefinite postponement of the realization of a completed road system.

The efficient working of any road building organization requires that the various branches of the work which are dependent on each other, quarrying, crushing, hauling, rolling, etc., shall so be arranged that each individually is working to capacity, but is not hurried in such a way as to encourage inferior work. The crushing outfit must deliver all the material which the roller can consolidate satisfactorily; if less stone is supplied the roller will be idling part of the time; if more, the stone will receive less rolling than it requires, and ravelling and rutting will probably follow. For the same reason the number of teams used to haul the stone must be adjusted to suit crusher output and length of haul. If more material is crushed than can be consolidated by the roller, the surplus should be stored in a convenient stock pile to be drawn on in case of breakdown or delay to the crushing outfit. If the roller is delayed or falls behind the crusher, the stone should be placed on the stock pile rather than strung along the road far in advance of the roller.

Where stone is imported by rail the maintaining of a stock pile is an absolute necessity. It has been found by experience that, even though the material may be shipped from the quarry promptly and the different sizes shipped in correct proportions, the railroads will not deliver it in the same proportions or with the same regularity, and unless a considerable quantity of each size is kept on hand, delays for want of stone of some particular size will inevitably occur.

The first operation in the construction of a section of road is usually that of grading. Wherever grading can be done in reasonably long stretches the employment of a traction engine will be found economical. The cost of operation of a tractor is approximately equal to the wages of two teams, or one may usually be rented during the spring and early summer for a similar amount. Ordinarily the amount of work done will be from 25 to 50 per cent. greater than can be accomplished with teams, due to greater tractive power and the elimination of periods of rest. If teams must be used they should be teams with previous experience at the work. In fact the operation of grading is one requiring experience in both men and teams. Not only is poor work sure to be done by inexperienced men and horses unaccustomed to the work, but positive damage may result. In no branch of road work is the wisdom of the permanent and continuous employment of men and teams better exemplified than in the operation of grading.

Where the removal of large quantities of earth is concerned, in such operations as filling and hill cutting, careful attention must be paid to the method of handling. For very short distances, up to say 150 feet, drag scrapers may be profitably used; above that distance, to about 500 feet, the material can usually be most advantageously handled in wheel scrapers: while for longer distances, dump wagons will be found more economical. There is frequently a tendency to adhere to the use of drag scrapers in the transportation of material for distances far too great for economy.

Another point to which more attention might be given is the selection of teams for use with scrapers. Light soil and sand are moved more economically by light teams, whose quicker movements permit the handling of more material in a given time. The loosening of all soil, except the very lightest, with a plow before attempting work with scrapers will also lower the cost of moving the material.

In quarrying and crushing operations money may be saved by carefully watching individual operations and seeing that maximum results are obtained for every expenditure of money or work. In the case of quarrying, the end desired is the loosening of rock, and as most of the expense of quarrying is made up of the cost of drilling and the cost of dynamite, the condition under which the greatest amount of rock can be displaced with the least amount of drilling, is the condition of greatest efficiency. For this reason the only satisfactory man to have in charge of a quarry is a practical quarryman.

The operation of crushing stone for road building affords a good opportunity for the study of scientific management. Usually the labourers engaged in this class of work are not in the habit of thinking very hard for themselves, and the duty of seeing that each man works to advantage will fall almost wholly on the foreman. First of all, the capacity of the crusher itself must be such as to deliver the stone in sufficient quantity to keep the roller busy. A crusher having a capacity of 100 cubic yards of 2-inch stone per day has been found most satisfactory. Whether the material be fieldstone or quarried stone, there is usually little difficulty in delivering to the crusher all it can crush. The real problem is to keep down the cost of this delivery to the crusher. Lifting the stone by hand should be eliminated whenever possible. The lifting of stone from wagons is a wasteful and labourious method, and is rarely employed when low costs are of first importance. Since the material must usually be delivered to the crusher in wagons, carts or cars, it might just as well be delivered as nearly as possible into the crusher jaws, and so, to as great an extent as practicable, reduce the cost of handling.

Whenever possible the stone should be delivered on a platform at the level of the top of the crusher jaws. Under ordinary conditions the cheapest moving of stone from the pile or quarry to the crusher is accomplished where handling by men is reduced to a minimum. Such results are usually secured with dump carts and an incline leading to a platform from which the stone can be dumped directly into the crusher. Even lower costs will be obtained through the use, where practicable, of dump cars running on portable tracks from the face of the quarry to the crusher. For best results the track must have sufficient grade to permit the loaded cars to be pushed by one or two men, but not so much as to prevent the empty cars to be pushed back by the same men. The tracks must also be at such an elevation that the stone may be dumped on the platform level with the top of the crusher jaws. In order that no delay may occur, two tracks should be laid and two cars operated, one to each side of the crusher. Such an arrangement will insure continuous work, both at the quarry face and at the crusher.

The prime essentials to rapid crushing are, keeping the jaws filled, and the rejection of stone too large to be handled by the crusher. When stone is delivered on an elevated platform, one or two men can easily keep the jaws completely filled, whereas, in handling from wagons or piles, five or six men have frequently been observed doing the same work, and the results were not so satisfactory. Stone in too large pieces reduces the output by causing frequent short delays, and the breaking of these large pieces with a sledge is liable to injure the machine. Blocking up the crusher off its wheels will increase the output by reducing the vibration, and will also prevent undue wear on the axles. Since much of the cost of wages in connection with crushing operations is for teams, the organization should provide for the reduction of their number to a minimum. This may be accomplished by supplying extra carts and wagons, so that the teams are not required to stand idle during loading operations.

The argument for keeping teams moving applies with even greater force to hauling operations. The wage of a team is from two to two and a half times that of a man, and lost or wasted time consumes a lot of money. For this reason alone the employment of spreading wagons will effect a considerable saving over the use of the ordinary wagon with gravel box. But, spreading wagons possess other advantages. In addition to the saving of approximately five minutes in dumping each load, and the better spreading of the material, these wagons, which are constructed with a definite capacity, will insure the hauling of a uniform quantity at a load, and permit accurate and rapid calculation of the total quantity hauled.

The discussion of methods of cost reduction would be incomplete without a reference to at least one important factor on which much of the efficiency of hauling depends, viz.: the size of the load to be drawn. Over fair roads it has been shown time and again that a good team can draw two cubic yards of crushed stone without difficulty. Teams which cannot do this should be discarded as unprofitable. Under no conditions should a load of less than one and one-half yards be tolerated. In certain counties of Ontario, a load of one-half cord, or over two and one-third yards, is insisted on, and no difficulty has been found in securing teams which would haul this load. Payment for hauling by the yard-mile has been found to work satisfactorily, among its advantages being the facts that an incentive is given the teamsters to deliver the material more expeditiously, and that the cost of hauling can be more accurately estimated in advance.

The size of the load is frequently governed by the grades to be traversed, and it often happens that the load is considerably reduced on account of a single steep hill or difficulty in pulling out of a deep gravel pit. In many such cases full loads may be drawn if a horse or team is stationed at the hill or exit from the pit to assist the loads over the difficult places.

It is frequently necessary to haul stone or gravel a considerable distance over ordinary township roads in poor condition. In such cases the cost of haulage may be reduced by the judicious use of a grader or drag, or even the employment of a roller for a day or two, to consolidate the road and produce a surface which will offer less resistance to traction. A reasonable amount of preliminary work with a view to facilitating or reducing the cost of any operation is sound practice and will more than pay for itself.

The possibilities of traction haulage are becoming more generally realized, and since it has been shown that the cost of transporting road building material may be reduced to a small fraction of that of team haulage, especially on long hauls, the subject is bound to receive in the very near future the attention it deserves. The cost of hauling with teams is between 20 cents and 40 cents per yard-mile, depend-

ing principally on the rate of wages, condition of road and length of haul, with an average on country roads of from 25c. to 30c. With a traction outfit the cost has, under very favourable conditions, been reduced to less than 5c. per yard-mile, while an average cost might be placed at from 8c. to 12c. per yard-mile or less. Since the cost of transporting materials constitutes a large percentage of the final cost of the road, it is easily seen that a saving in hauling costs such as the foregoing will be a long step towards cost reduction.

Having delivered the material to the road the next step is its consolidation, and as in all other operations, the less work wasted, the more cheaply it will be done. Probably more work is done to no purpose in the work of rolling a road than in any other operation. The rolling must be so performed that every passage of the roller accomplishes something in the final consolidation of the stone, and to this end it is imperative that a thoroughly qualified man be in charge of the roller. With careless or inefficient handling, the roller may on one passage partly undo the work of the former passage, and not only will the work required for final consolidation be increased, but the individual stones comprising the road surface will become rounded from the excessive grinding on each other and the final result will not be so satisfactory. In order that the sharp edges of the stone may be preserved as much as possible and thus tend to prevent internal movement, the less rolling the stone receives, consistent with thorough consolidation, the better. Rolling is a science and must be carefully studied in order to secure best results.

For efficient consolidation the road must be finished as the stone is delivered. The practice of laying long stretches of stone and partly rolling the whole length is wasteful of labour, since much of the work of rolling is undone by traffic passing over the partly rolled stone. The closer the end of the finished road can be kept to the wagons delivering the material the more cheaply will the work be done. This is especially true where a temporary road cannot be furnished and where traffic travels on the new road before and during rolling.

Wherever possible rolling should be commenced with the whole width of the roller, except the inner rear roll, on the earth shoulder. This is for two reasons; the earth shoulder is rolled at the same time as the metalled portion, and the stone is consolidated first at the outside, retaining the desired crown. By rolling back and forth, working slightly toward the centre at each trip, say six inches, or approximately one-third the width of the rear roll, the stone is gradually consolidated without forcing it outward or reducing the crown.

To secure satisfactory consolidation the stone must be confined at the sides, in the same way as a curb confines the material on a city street. No matter how carefully the rolling may be done the loose stone exhibits certain of the properties of a liquid, and pressure exerted on any part of the surface is transmitted through it and tends to force it out at the sides. Unless this lateral movement is prevented, satisfactory compacting of the stone cannot be secured. Another advantage attending the confining of the stone at the sides lies in the fact that a substantial depth of metal is retained at the edge instead of a thin edge which is so easily broken off, usually resulting where stone is deposited on the surface and allowed to spread with rolling. The stone is also consolidated with the width originally intended, not one or two feet more, with a corresponding decrease in depth.

Where the road has been freshly graded, and where no stone or gravel has been formerly applied the centre of the road may be trenched out with the grader, leaving a shoulder of earth at each side. The stone is deposited between the shoulders, and stone and earth shoulders rolled together. Where it is deemed inadvisable to disturb an old stone or gravel surface, the new material may be deposited in the centre, and

an earth shoulder drawn up with the grader, and earth and stone rolled together as before described. Where the old metal surface extends beyond the width of the new metal, or on hard clay roads where the operation of the grader is difficult, small trenches six inches wide and four to six inches deep may be picked in the subgrade to hold the edges of the stone, and the shoulder thus formed will keep the metal within the desired width.

Having in view the fact that the efficiency of rolling operations depends largely on keeping the roller working, it is well to remember that anything which tends to retard the roller's work destroys its efficiency. Frequently a serious retarding influence is lack of water for flushing the road. Whenever the water used for this purpose must be hauled a considerable distance it will be well to have two tanks in commission, in order that the roller may not be held up while waiting for the return of the tank. The time lost through this cause will amount to a very considerable total, whereas the cost of operation of an extra tank is negligible.

The application of the water to a road during construction may seem an unimportant item, but on it depends the success of the work, and the quality of the finished road. Moreover, a considerable part of the cost of this part of the work may be saved and better results obtained by careful management. The old method of filling the tank with a hand pump has been superseded in many up-to-date outfits by a power driven pump operated with a gasoline engine. The tank is filled in a fraction of the time required to do the work by hand, the difference being most noticeable in hot weather, when hand pumping is very labourious.

The same power driven pump may be used to effect still another saving when putting the water on the road. Instead of hauling the tank back and forth ahead of the roller it may be placed at the side of the road in the middle of the section to be finished, say 125 feet in length, and with a 50-foot length of one-inch hose the water may be applied wherever required on that section. When one section is finished the tank may be drawn ahead to the next by the roller. The amount of water used by this method is less than by the ordinary method, since it is applied only where needed and none is wasted, less being allowed to run off the sides, or sink into the subgrade. The continuous employment of a team on the tank is dispensed with, or, where two tanks are employed, the team may be going for one tank of water while the other is being emptied. Another important feature of this method is the fact that the stone is not disturbed by the horses or tank travelling over it and turning on it, and the roller's work is not thereby partially undone. Also that the roller and tank do not get in each other's way, causing frequent short delays. The same results may be obtained even with a hand pump, but are not quite so satisfactory or economical since the services of one or two men are required on the pump. Watering should be done in short sections, particularly in hot weather, from 100 to 125 feet having been found a satisfactory length. Where the sections are too long the heat may cause the evaporation of the water almost as fast as it is applied and much loss be occasioned thereby.

The foregoing discussion of county road construction has been with a view to increasing the efficiency of operation. There is, however, an efficiency of a different kind to be considered, which may be termed the efficiency of organization. The former deals with actual practice and is concerned with the methods by which each part of the work is done. The latter deals more with principles, and concerns the work as a whole rather than any individual operation. The principles themselves may be more or less abstract, but they produce concrete results which have a direct bearing on the ultimate cost of the work.

An important contributing factor to the success of any work is the interest taken in it by the men doing it, and the degree of contentment felt by them. A contemplation of the principles of efficiency or of obtaining best results from a given expenditure does not imply resort to what is commonly known as "nigger-driving." The working of men to the limit of their physical strength and endurance, even when they will submit to it, has never been profitable, except perhaps for very short periods, or in cases of emergency. The degree to which men can be "driven" will, in any case, depend on the condition of the labour market. Maximum effort on the part of workmen is valuable, but to be continuous, it must be obtained in such a manner that the men themselves feel it is to their advantage to make it. Efficient service can be obtained only from men who are contented with their work, their wages, and their general treatment, and while the term "efficiency" is generally used to imply a satisfactory return to the employer for his expenditure, it can rarely be attained without providing a satisfactory return to the worker for his labour.

As a factor in promoting the contentment of the men, the road camp takes first place. Both employer and employees benefit by such an arrangement. Camp life in summer is a healthy life, and tends to promote an enthusiastic spirit in the men which prompts them to put forth their best efforts. Valuable time and energy are not wasted going to and from work, as is the case when the men live or board at a distance; they are held together better during bad weather, and lost time caused by rain is frequently reduced to a part of a day as against the whole day if the men leave the work.

One of the first essentials for the successful carrying out of road building operations is competent supervision. Skilled workmen are indispensable to first-class work, capable foremen contribute much to the quality of the final result and economy of operation, but neither foremen nor workmen can work to advantage without proper guidance. The choice of a superintendent is a serious matter and should not be influenced by local interests or favouritism. The question of salary should not play too prominent a part; one man at a high salary may be more economical than another man working for nothing. At the present stage in the development of road building in this Province, the experience of the various municipalities goes to show that in the majority of cases it is impossible to secure men trained for the work, and many are compelled to acquire their experience on the work itself. In such a case it must be borne in mind that the municipality must pay in one way or another for that experience, and it might just as well pay for it in salary as in the extra cost of work incidental to inexperienced handling. Great care should, therefore, be exercised in the selection of the superintendent. He must be a man considerably above the standard of a successful foreman, while combining all the qualifications necessary in the latter. Above all he must be possessed of the ability to handle men and also to transact such business as will be connected with his work. To put it briefly, the type of man required for the position of road superintendent is that type which would produce a successful contractor on the same class of work. Practical knowledge of construction methods must be combined with executive and business ability.

While a certain amount of the superintendent's time will be required in the office, such time should be reduced to a minimum in order that as much time as possible may be spent on the work. To this end, if the work of construction is carried on on an extensive scale, it is better that he be given clerical assistance, rather than that a large part of his time be taken up with office work, which may just as well be done by a clerk. For the same reason his time should be spent on the work

itself rather than that much of it should be spent travelling between jobs. If he is compelled to depend on railroad trains and livery horses, or on his own horse, to move from job to job, much of his time is spent to no purpose. The day of such methods of transportation over counties comprising several hundred square miles is past, and the only means of travel in keeping with the principles of efficiency demanded in other branches of the work is the automobile. Three times as much ground can be covered in the same time as with a horse and buggy, and in many cases the superintendent adopting this method of travel is enabled to visit each piece of work daily, if necessary.

In the discussion of methods by which the efficiency of a roadmaking organization may be increased, or more results obtained for less effort, mention must be made of the means by which the resultant saving is recorded. It goes without saying that the lowering of cost produced by the introduction of labour-saving methods is of little avail unless the sources of the lower cost are accurately recorded, to be used as a basis for future operations. A single experience in cost reduction usually whets the appetite for more and greater reductions, and the great essential at such a stage is a suitable system of keeping records of cost. In road building operations such as we are considering, a system which will furnish us with certain necessary data need not necessarily be complicated. The basis for all comparisons of cost is the unit cost, such as the cost of material per ton, yard, cord or toise, cost of crushing per yard, etc., cost of hauling per ton-mile or yard-mile, cost of finished road per mile, per square yard, or per cubic yard of material, etc. The object of such a system should be to furnish the foregoing unit costs, to be used in the preparation of future estimates and in comparing the detailed costs of the various sections in similar units. Using the information thus gained it is an easy matter to recognize efficiency in those outfits which are producing results at low costs, and to take steps to check extravagance, waste and inefficiency in those outfits whose operating costs are higher than they should be.

Summing up in a single sentence, the efficiency of any road building organization may be greatly increased by systematic planning of the work, by competent and careful supervision, by the selection of the best and most reliable workmen available, by fair treatment of all men engaged in the work, by so proportioning each operation that the various branches are kept working to capacity, and finally by the adoption of a suitable system of records by which itemized costs and unit costs can be easily obtained. The general adoption of principles and methods such as have been suggested should raise the status of rural highway construction, making it less of a haphazard business and more of a science.

FOURTH SESSION

Wednesday Afternoon, February 28th, 1917

The President, S. L. SQUIRE, in the Chair.

ADDRESS

Colonel J. E. Farewell, K.C., Whitby, Ont.

Mr. Chairman and Gentlemen of the Good Roads Association: I am sure it gives me great pleasure to be here to-day. I was secretary of this Association in the days of long ago. Let me tell you something of how this Association came to be formed: Some twenty-five years ago Peter Christie, afterwards the member for South Ontario, and myself were deputed to go to Ottawa to see what was going on down there. An association for the promotion of Good Roads in Eastern Ontario was in session at Ottawa. It was agreed that there was no reason why the people in the West should not also have a good roads association, and we recommended that a step be taken in that regard. We got in touch with the people from Western Ontario at the Toronto Exhibition. The Warden of the County of York was made the first President and I was appointed secretary. My friend, Mr. Pugsley, and myself succeeded in getting a grant from the Province to aid in the work and I am sure that a great deal of the legislation that has been placed on the Statute Books in relation to the road question is the result of the formation of the Ontario Good Roads Association. I am glad to see that you have such a large attendance at this meeting and that the interest is not dying out. In fact I believe the interest in good roads is just commencing. We are only now discovering that we must have good roads as well as railways. I am glad to see that so many counties are taking up this good road question, it is one of the best assets that any county can have. The autos are here to stay and they must have good roads to travel on. It is quite clear that 15th and 16th century roads won't do for the 20th century. We must have better and wider roads. As solicitor for townships I have had to advise settlement of damage cases because the roads were too narrow. Then it has been decided by the Judge of Welland County that bridges must be strong enough to carry a traction engine and if they are not then the municipality must pay damages if any accrue. That decision has been upheld by the Court of Appeal. We must all keep in mind that we are living in the 20th century, and that our roads must be up to date and suitable for the traffic of the 20th century. One of our great troubles is that every man wants the good road in front of his own farm, but we cannot do that. The Provincial Roads will have to be built where they will do the most good. I think the time has come when the Government is prepared to take over the Kingston Road as a Provincial Highway. I hope they will see their way clear to commence improving it during the present summer. I am glad to have this opportunity of being with you and thank you for your kind attention. (Applause.)

ADDRESS

Professor A. T. Laing, Toronto University

Mr. Chairman and Gentlemen: I have just come in and haven't anything special to say to you. I shall, however, say a word or two with regard to the attitude of the University to the work that is closest to the heart of those that are interested in good roads. Some three or four years ago we instituted a course intended to develop that part of our engineering work which would render men more readily available for the problems with which you are confronted. These problems scarcely come under the classification of engineering work. We all know that the man who has spent a life time in road building is the man whom you want to employ on your roads, nevertheless there are problems closely related to engineering in connection with your work and these are the problems to which we are giving more particular prominence in our engineering course.

Combined with courses in Highway Engineering are problems of sanitation and kindred subjects with which the municipalities have to deal. We also combine with that water purification, water supply. The laboratories that we have are of course equipped for all these problems and they are at the disposal of the Provincial Department of Highways, and we have already made several investigations for them. One point that I try to impress upon our students is that they must try and impress upon the community the advantages of a delightful road as well as an economic road Other problems that they have to impress upon the public is the increased value of land by reason of good roads in the neighbourhood. No one set of rules can be laid down that will apply to all conditions. The people of our Province have come to the point where they are willing to spend a little money even though they do not receive any financial return. We are going to do a great deal towards improving the spirit of the people in meeting problems that they have to deal with. I have sought to impress upon my men that the economic question itself is scarcely sufficient to warrant expenditures that are often necessary. I think a good many of you have reached the same conclusion with respect to your advocacy of good roads in your own community. I spent part of my early life in working upon roads, in fact doing some statute labour. I have the honour of being a path master still, and if any of you are inclined to doubt the value of the old statute labour system I want you to come and visit a half mile of road that passes a little house I have out in the country. I think it will speak even well yet for some of the statute labour work.

I have the keenest interest in the work of this Association, and trust your deliberations will be fruitful of good results.

I do not wish to take up your time as I know you have a great amount of business to come before you. It is really delightful to see such a splendid audience as you nearly always have at this convention, but I think the attendance at this meeting exceeds most that I have attended. (Applause.)

"RURAL AND URBAN INTERCOMMUNICATION"

By Controller Thomas Foster, Toronto

Mr. Chairman and Gentlemen: I congratulate you upon the splendid success of your Convention. I am sure it must be gratifying to those who have made an effort to come here to find that it is such a splendid success. I would like to ask the question, Who were the greatest road builders, the ancients or the moderns, the Romans or the Britishers? And in answer to that question I want to give you a little experience I had a few years ago in travelling on the Continent. In visiting the north-east part of England, I was going over some very beautiful roads and was admiring them, and I passed the remark that they were splendid roads. I was told that the foundation of these roads was laid by the Romans, and up to date they were in excellent condition, but they had to be maintained. I was in Italy shortly after that and while in Rome I had occasion to go to the Catacombs, and in doing so I had to go out the Appian Way which is the main artery leading from Rome to Jerusalem, and that road they tell me was built by the early Romans, and I said they deserve a great deal of credit. Some 2,000 years ago that highway had been constructed and was still in existence. The principal fault I found with it was that it had not been maintained, with the result that the upper surface was worn and only the bare part of the foundation was left. If it had had some attention and been properly maintained, it would be in excellent condition to-day. I noticed that the foundation was constructed of flat stones, and the road was built up from that to about ten inches, and the finished part in some places was similar to our granite blocks—smooth stone laid out in blocks. But at the time I travelled over it, it was in very bad condition on account of not being properly attended to. Apparently the ancients had good ideas as to the building of roads.

From Italy I went to the United States and travelled over what they call the State Road between New York and Buffalo. The part between New York and Albany and Syracuse was tar macadam and was a very beautiful road when it was first constructed, but having constructed the road that it was desirable to travel on, and New York being a very large city, it created a tremendous traffic and that character of road was not a success on account of the heavy traffic that was put upon it. By experience, they decided on coming farther to the north, they would construct a concrete foundation with a brick surface, 18 feet wide. That part of the road has been down some six or seven years, and I have travelled over it twice in the last two or three years, and it seems to stand the wear splendidly. It is no doubt a very much more expensive road, but in the end it will be cheaper and give better satisfaction. There is a heavy traffic in that part of New York, especially in the Buffalo and Niagara Falls districts, and I think this brick pavement will prove a success.

Then, last summer, in travelling through Oregon and Washington, I noticed that in Oregon towards Denver, they have many miles of newly constructed highway of concrete, which seemed to be in good condition, but they were only recently constructed. Passing on to the district of Calgary, one of the main arteries, which has a tremendous traffic, as it is like our esplanade, is constructed of concrete block, so that the horses can walk upon it without any danger. That, no doubt, is giving very good satisfaction, but the trouble they have with it is that it wears into pockets, and these pockets hold water and become larger and larger, and the road, unless repaired, gets into very bad shape. Therefore, I do not think that kind of a roadway will be a success.

I noticed in various cities of the West, Winnipeg, Brandon, Calgary, Victoria and Vancouver, that the principal construction was concrete and asphalt, and from my observation I must say that if you want a good surface and one that is easily resurfaced, you will get good value out of that kind of construction.

Coming to our own city, I may say that we have tried everything that can be thought of, and we have experimented in every way to try and get a durable, substantial and economic method of road construction. We have tried macadam and block pavement, brick pavement, asphalt, bituminous concrete, and we have some concrete sections. The sections that we have constructed of concrete have given fair satisfaction. Some twenty years ago when Mr. Rust was our engineer and we had been experimenting with different pavements, I noticed that a crossing constructed of concrete gave excellent service, and I said to him, "If concrete will stand on the crossings, why would not it make a good pavement for some of our streets and lanes?" At first he did not think it would be a success, but I continued reasoning the matter out with him, and this construction was adopted for some of our short streets. The first construction was on Francis Street, some twenty years ago. It was blocked off so that horses could travel on it, and it is still in existence to-day, and with minor repairs it is a good road. Since that time lanes and blind streets have been constructed of concrete. On our main streets we have tried scoria blocks, wood blocks and almost every method. The granite block we found to be slippery and noisy and rough, and after that we tried asphalt, and asphalt surface where there was heavy traffic, and that is the most successful pavement we are constructing to-day. It is very easy to place on it a new surface because there is a foundation there that will do for all time, if it is well put down. I notice that for this year in New York they have prepared estimates for public highways and rebuilding of $160,000,000. That shows the progress that is being made in that State, and it is really necessary from the standpoint of transportation.

I will try and give you a little of the history of what the Toronto and York Highway Commission has been doing. This is my third year on that Commission. When I first went on the Toronto and York Highway Commission I was not satisfied with the methods of building that were being adopted. I found some fault and we discussed it with our engineer. I said that I thought instead of having a macadam limestone surface, we should have something more substantial. As you all know limestone surface becomes rutty and is dusty, and I thought we should have either the granite or trap rock for the surface, and that this kind of surface would give better results. I also found fault with the width. They were putting down a width of 12 feet, and that, you must admit, is very narrow, especially if the ditch is close to the pavement. Now we are building them 15 feet wide, and the main arteries from 18 to 20, and we build up the sides and shoulders so that people can travel on them with safety. We have adopted a better method of construction, and although it costs more money, it is better in the long run.

The Toronto and York Highway Commission was organized in July, 1911, for the purpose of building good roads leading from the city into the county. We started out building so as to make it convenient for those in the suburban and rural districts to get into the city. The Commission undertook the construction of 110 miles of these roads to tap some 500 square miles or 320,000 acres of the best land in Canada, and when I say that I think you will admit it is not an over-statement, because if you take the Province of Ontario, you will find that the County of York and bordering counties are as good as any counties in the Province. We tried to make it easy for people in this vast territory to reach the City of Toronto. In 1915

the area was extended to embrace the whole of York County. The Commission now has 210 miles of highway under its control and covers York County to Lake Simcoe.

The first roads built were of water-bound macadam and were made 12 feet wide, and they cost about $6,000 a mile. In 1912 a higher type of water-bound macadam was built costing about $7,000 per mile. In 1912 the Commission also built half a mile of brick pavement on a grade of about 7 per cent. which cost about $22,000 per mile, and which has given satisfactory results. That year the Commission also built 30 miles of water-bound macadam at an average cost of about $7,500 per mile. In 1914 the Commission built a bituminous-bound macadam at an average cost of $10,000 per mile. That is a much better construction than the water-bound macadam. In 1915 and 1916 the increased cost of labour and materials made that pavement cost about $11,000 per mile. In 1916 the Commission laid on Dundas Street, at the city limits, an 18-foot brick pavement with re-inforced concrete at a cost of about $24,000 per mile, and that will be the best piece of road construction in the county. The concrete is re-inforced, and the very best brick material has been used, and the curbing is well constructed.

The Toronto and York County Highway Commission has built about 85 miles of improved roads with bridges and culverts at a cost of about $700,000. The Toronto and Hamilton Highway Commission has built about 33 miles of road at a cost of about $925,000. In 1914 the motor licenses numbered 25,500. In 1916 the motor licenses numbered 45,300. That shows the great increase in motor traffic.

After spending these vast sums of money to give the farmers easy access to the city, we expected that the city would benefit, and that it would be an inducement to the farmers throughout the district to come more frequently to market and give the consumer an opportunity to purchase their products without the intervention of the middleman, and that would not only benefit the City of Toronto, but would benefit the farming community as well. Under the condition of bad roads the farmer was not disposed to come frequently to market, because it was expensive and undesirable, and he preferred to pay a commission to the commission house rather than travel to town. We changed that condition by giving the farmer good roads, but the result has not developed to the extent that we expected it, and I must say, as one of Toronto's representatives, that after spending nearly $2,000,000 we are disappointed. We thought that the farmers would have brought in their produce to a greater extent, but that is not the case. We expected that great advantage would be taken of these splendid highways and that we would have to extend our markets, but that has not been the case. Our old market is still large enough, and on Saturdays gives fair accommodation. Why is that? I have tried to reason it out and I have come to the conclusion that notwithstanding the farmers have good highways and easy access to the market, it does not pay the farmer to come to the market, and if that is the case I think we should find some other method for utilizing our money instead of expending it on the highways.

I noticed in travelling through England and France and Belgium that they have a co-operative system for marketing their goods. For instance, if I live in the neighbourhood of Richmond Hill, a co-operative association or club would be organized there and 50 or 100 farmers would arrange with some one person to market their products, and he would bring them in in a large motor or carrying van which would carry two or three tons. This man would go to every farmer twice a week and gather up all he had to sell, no matter whether it was 10c. worth or $100 worth. He would market that twice a week, and it would be put on the market in fresh condition. I would be glad to see some such system as that adopted in the vicinity of Toronto so that we could get farm products on our market in a fresh condition.

I think there is a necessity for something of this kind so that advantage could be taken of the good roads that we have constructed. If something of that kind does not develop, then there will be no encouragement to build roads merely for the purpose of automobile traffic for pleasure. Automobiles have increased from 25,000 to 45,000 inside of a couple of years, and they are taking advantage of the good roads at your expense. We do not object to them, but we would like to see more farmers travelling on these roads with produce for the Toronto market. We would like to see the farmer using the auto the same as the people in the city. Between Toronto and Hamilton we have spent almost $1,000,000, and that ought to be one of the greatest producing sections on the Continent. The soil is well adapted for the growing of vegetables and fruit and grain and for poultry farming or any other kind of farming, and Toronto should benefit by that splendid highway, and the land between Toronto and Hamilton should be sub-divided into ten and 20 acre farms—that is the size of the farms that they have in France and Belgium, and it is surprising the quantity that they will take off a few acres.

We all believe that it is a good thing to build good roads. It is beneficial from every standpoint—from the standpoint of comfort and in every other way. It gives encouragement to the rising generation because they can with ease have access from one point to the other. There is nothing more delightful than to be able to travel through the country at any time, and an easy means of transportation will have a tendency to encourage the coming generation to be more contented at home.

I suggested to our Commission the other day, and I notice it has been taken up in the Provincial House, that we should be permitted to go farther and plant ornamental trees along these highways so as to make them more attractive in appearance. There seems to be as little of that around Toronto as in any part of the Dominion, but when you get 15 or 20 miles away from Toronto, the roadways are more attractive, and I think we should have legislation whereby we can spend a small amount each year for the purpose of improving the appearance of the highways. I would like to see this Association try to find out the best method of marketing the products throughout the district within 100 miles of Toronto.

ADDRESS

"ROAD TRAFFIC AND ITS REGULATIONS"

By Warden J. G. Cornell, York County

Mr. Chairman and Gentlemen: I must congratulate the Good Roads Association on coming together at this time, and I desire to say on behalf of York County that we very heartily welcome you to our midst. The address which we have listened to from Controller Foster has been beneficial. He has given us some good points on road construction, and he has given us the view of the City as to the money which has been expended in building good roads throughout the suburban districts. I might say with regard to the marketing that we regret it is not patronized to the same extent it was a few years ago, but I believe it is not due to the fact that good roads have not been patronized, but to other conditions. There are two reasons why the farmers' market is not as large in Toronto as it was a few years ago. The land outside of the city has been sub-divided and is not cultivated, and another reason is that a great many of the farms in the vicinity of Toronto are given up to dairying, and they ship their milk to Toronto by train. During the last few years market gardening has been pushed out farther from the city, and in a few years this will develop to a greater extent, and good roads will be more required than ever.

I can say for York County that we are heartily in sympathy with the good roads movement. We know it is one of the best investments from a county standpoint that can be made. Good roads have been neglected throughout the county. Many of the leading highways in this country were built as military roads between 1830 and 1840. After that they came back to the system of county control and township control, and to-day we see the result of that. Some of the highways, only a few miles out from Toronto, that have been controlled by path masters, are a disgrace to the Province. It would have been much better if they had continued under Government control. Those who are interested in good roads believe it is one of the best movements that has ever taken place when the Government again took up the control of leading roads.

I understand I am on the programme to say something as to the regulation of traffic on roads. As the Chairman has informed you, I have only a few minutes and will not be able to give you much information. York County has taken steps to remove one of the difficulties, not so much from the farmers' standpoint as from the motorists' standpoint. A great many farmers are motorists now and a few years ago, the motorist asked us to do away with the fee system because it was an unpleasant part of the motorist's life when he went out in the country to afterwards receive summons to attend the County Police Court and pay a fine. The fact that the constable received a fee, they contended, was an inducement for him to bring them up whether they were guilty or not. This certainly was a grievance, and the County Council of York have carefully considered it and we have done away with the fee system altogether, and our constables are now paid a salary, and the motorists consider it a great improvement. We will never solve the speed question. As to whether the present limit is too low or not is not a question for me to say, but I believe if the constables would use common sense in the matter it would be much better.

THE CHAIRMAN: I am very glad indeed to have the opportunity of introducing to this audience the Hon. Finlay Macdiarmid, Minister of Public Works for the Province of Ontario. It is due to him perhaps more than any other man that we have the splendid superstructure that we now have in connection with good road laws. The building is not yet completed, but I am quite confident that the Minister will tell us something this afternoon of some of the ornamentation that he is likely to do in connection with this splendid structure. I have great pleasure in calling upon the Hon. Mr. Macdiarmid to address you.

ADDRESS

By Hon. F. G. Macdiarmid, Minister of Public Works and Highways, Ontario

Mr. President and Gentlemen: I can assure you that it is very pleasant indeed to meet this magnificent gathering this afternoon, representatives from the various counties throughout the Province of Ontario and also from the cities. You are gathered here to discuss questions relating to the road situation generally throughout the Province of Ontario. I am pleased indeed, as Minister of Highways in the Province of Ontario, to see such an interest taken in this important question. The gathering this year exceeds any gathering you have had since the inception of your organization. There are many present this afternoon who have watched this organization grow from a very small beginning when men took up this movement and

there was very little interest shown in it throughout the Province of Ontario, but through their loyalty, it has grown to be one of the great movements affecting the general welfare and prosperity of the people of this Province. Those who commenced the movement continued their agitation, and to-day they must feel satisfied that they have behind them the great body of public opinion in the Province.

I have listened with the greatest interest to the review of the work carried on by the City of Toronto in connection with building roads in the surrounding district. It was a very able review of the situation and I want to say that the City of Toronto has shown a splendid disposition to co-operate in connection with the Good Roads Movement of the County of York and the district tributary to the City of Toronto. If the City of Toronto has not received all the benefit anticipated, I believe the connecting up of the Good Roads System will open up a territory that will be in closer touch with the City, and when the Toronto and Hamilton Highway is completed their expectations will perhaps be almost fully met. We do believe that the construction of good roads has a direct bearing on the cost of living of this Province. We believe that by the construction of good roads a larger area will be brought into direct communication with the cities. The motor truck will come more generally into use with the construction of better highways. The motor truck as a commercial vehicle will more and more be in evidence, it will reduce the number of times that produce has to be handled and that will reduce the cost of placing the product in the hands of the consumer, and it will be in better condition than it would be after being handled by different transportation companies. We have no quarrel with any other system of transportation, but we do believe that in the Good Roads Movement and in the development of good roads in the Province of Ontario, there is the solution and the only solution for many problems that we have to deal with. It is the transportation system in which the great mass of the people are interested. It is the transportation system that we are after. It is the system upon which there is no toll charge. It is the system and the only system where men meet on a common level and every man's road is regulated by the general law.

The past two years has not been a favourable time for road construction for the reason that labour has been scarce and wages high. Demands for labour have been great in other fields, but progress has been made notwithstanding the conditions that have existed, and during the past year four counties have come into the Good Roads System—making 24 counties out of a possible 37 that have adopted the Good Roads System in the Province of Ontario—Essex, Prescott, Brant and Stormont, Dundas and Glengarry have, during the past year, entered into the Highway System and that leaves twelve counties still to adopt the system. When these come in we will have a uniform condition of affairs throughout the Province of Ontario.

The legislation that we introduced during the last session increased the Government grant towards road construction from one-third to 40 per cent. We placed upon the Statute Books of this Province a law under which we become liable for 20 per cent. of the maintenance, and not only did we do that, but we passed legislation to encourage the appointment of a superintendent for township road construction, which I believe is a very important piece of legislation, and relieves municipal officers from acting as their own commissioners, and insures continuity in the construction of the township roads. I believe it will make municipal life more attractive for the men who are willing to serve municipalities, than it is at the present time. Councilmen do not desire to be placed in the position where they have to be called here and there throughout the township for the purpose of carrying out some trifling piece of work—the replacing of a plank or the fixing of a culvert or

the construction of a catch basin. They do not desire to be taken from their homes and from their own work for this purpose, and by the appointment of a commissioner, this work will be brought down to a businesslike basis and a foundation can be laid upon which a substantial organization can be erected.

With the coming of the motor, conditions have rapidly changed in this Province. The motor traffic is very heavy to-day, as Controller Foster has pointed out. The very rapid growth of the motor traffic in this Province is evidenced by the number of licenses issued from year to year. To-day we are in receipt of $650,000 from motor licenses, and if the average rate continues, we will receive for next year in the neighbourhood of $750,000, and the year 1920 will be almost certain to reach the million dollar mark or over. After a survey of the whole situation, we felt that the time had arrived when the Province should step in and take care of this traffic. It is not local in its nature in any sense. It is really more than provincial. It is international in its character. Under these circumstances we thought the time had arrived, we felt sure that public opinion would be behind us, we were certain that the Good Roads Association of the Province of Ontario would be behind us, in declaring for a system of Provincial highways in the Province of Ontario. (Applause.) Believing that public opinion had reached that state, it was announced in the speech from the Throne at the opening of the Legislature, that legislation would be introduced providing for a system of Provincial highways. It is a development of the future and it has been brought about as a direct result of the motor traffic. We only wish to throw upon the shoulders of the taxpayers of the local municipalities their fair portion of the cost of looking after that traffic, and we believe that the balance, whatever that is, should be borne by the Province. I may say here, without speaking positively with regard to the proportion, that we propose to assume a substantial proportion of the cost of these Provincial highways.—(Loud applause)—a proportion which I believe will at once appeal as fair to all men who are willing to consider the situation. It will connect up the existing County Road Systems throughout the Province of Ontario. As we are geographically situated here, the great weight of the population lies along the southern boundary of the Province of Ontario. A road can be selected and designated running from Windsor to Montreal, and within a distance of 12 miles on either side of that road, you would find that almost 60 per cent. of the entire population resided, and an equal percentage of the assessment. Under these circumstances, I think there will be little difficulty in locating the road where it will do the greatest good to the greatest number.

As I said before, I do not wish to encourage or raise the hope that an aggressive effort will be made to do much construction work until such time as the job that is engaging the mind of every person is settled, and finally settled on the battle fields of France and Flanders. (Applause.) That does not mean that it is not our plain duty to get our organization in shape and to designate the roads and see that they are not neglected. Where necessary repairs are required they should be made, and I have no doubt that labour sufficient for all these purposes can be secured, and that the organization can be so perfected and the situation may be so studied, that the Department will have all necessary information and be in a position to deal with it from a point of view that will be economical and business-like in every respect.

Now, Mr. Chairman and Gentlemen, I do not know that I should detain you longer this afternoon. I am sure the Department of Highways follows your proceedings with the greatest possible interest, and will be governed largely by the views expressed during your meeting. We know that the opinion expressed and

the conclusions reached after thorough discussion and debate represent the best line to follow.

There is one question that, in fairness, I must refer to. I have noticed the tendency from some sections of the Province to advocate the return of the automobile fee to the separate municipalities, and I want to say frankly, gentlemen, that it appears to me that if such a policy is advocated and endorsed, supported and sustained by any large body of public opinion, it will jeopardize and imperil the good roads movement in the Province of Ontario. (Applause.)

ADDRESS

"ROADS BEHIND THE LINES IN FRANCE AND FLANDERS"

By Major T. L. Kennedy, Dixie, Ont.

(Illustrated by Lantern Slides from Department of Public Highways)

Mr. President and Gentlemen: There is not very much that one can say about the roads behind the lines. I would like to first state how pleased I was to hear Mr. Seneeal say yesterday that evidently there was a lot of misunderstanding between the French-Canadians and the English-Canadians. It was my pleasure to spend some time beside the 22nd French-Canadian Battalion a year ago when they went up into holes in the ground called trenches J and K near the River Couve. I won't say it was not without a lot of cursing and swearing, but week after week all last winter, they went through and came back again—most of them. I understand that no battalion that took part in that wonderful victory last 15th of September did better than the 22nd. (Applause.) I have always been a little proud of having Irish blood in my veins, but after seeing the courage of the French children from 5 years up, and the courage of the French women up to 80 or 90 years of age, and the courage and endurance of the French troops, I think I would be just a little proud of having French blood in my veins if I had any. The only thing I am proud of now, above everything else, is that I am a Canadian.

I found there was a little different atmosphere about the roads of England, France and Belgium than there is in Canada. They being older settled countries, it was not Bill Smith's highway or John Jones' highway, but it was the King's highway or the Government highway. I found that they repaired the highways there without the jealousy that takes place here.

When the war had been on for a year, and the factories not engaged in war work in England were being closed, they still continued to operate the factories that were manufacturing by-products used in road building. They said road building was one of the most important problems in England.

While in France and Belgium, I was billeted in farm houses, and I took the opportunity to ask the owners and tenants how much taxes they paid for the roads and how and where the money so collected was spent. I found that the taxes for road building were often sixty per cent. of the total taxes, and that they were spent just where the money was most needed: nobody knew on which road the money was to be spent, and there was no grumbling. They took it as a matter of course, just the same as you would buy boots if your boots were worn out. It did not make any difference to them if the road was built some kilometres from where the taxpayer lived. They were Government roads and not the roads of John Smith or Bill Jones.

The best road I ever saw was the road from Calais to Paris. I hope our road from Windsor to Montreal will be as good. I spent three weeks at a rest camp

and spent some time on this road. My recollection is that it was 27 feet wide of solid pave built on top of macadam, the old Roman Road. The part I passed over was as straight as an arrow, and was kept in magnificent repair. Every mile was patrolled every single day, so that a transport could go through at high speed and without any stop. It is nothing unusual to see a truck loaded with thirty tons going up that road, or a truck hauling a heavy gun. They will take a load of thirty tons to within a close distance of the firing line just as easily as you would haul a buggy over our roads. The main roads through Belgium were constructed by Napoleon during the progress of his wars, and they have been kept in splendid repair until the present war. After this war started some of the roads could not be kept in repair, and they soon went back into holes.

The high commands soon recognized that the winning of the war did not depend so much on the bullets they fired as on keeping the men warm and feeding them properly. I think the French caught on to this faster than we did, and after a French soldier had been wounded, if he was fit for work, he was sent repairing the roads where he would have a good barn to sleep in and good food to eat. I think I am safe in saying that a million men are now employed in keeping the roads in good shape for traffic.

The roads to within 12 miles of the firing line are kept in splendid shape; they are as good as any roads in the City of Toronto. From 12 miles to the firing line they are in poor shape, fairly good shape or very bad. Everything required by the army is brought up to within a distance of about 12 miles of the line by train. It is there placed in large motor trucks and brought to within six miles of the line. It is then placed on heavy G. S. wagons (ordinary farm wagons) and drawn by six mules to within different distances of the firing line. Sometimes they cannot keep to the roads and they have to go over the fields, but these mules will take a wagon almost any place. From then up the supplies are placed on the backs of mules and carried forward close to the lines and the men carry the supplies into the trenches on their shoulders. That is the only safe way to get up the supplies.

For a certain distance back the roads can be repaired in the day time, and trucks and men are employed hauling stone and keeping the roads in repair. Belgium refugees and others are given 60c. per day by the British Government for working on these roads. These Belgians can give the Canadians "Cards and spades" in doing statute labour. Any good man could do as much work in ten minutes as they can do in ten hours. There is usually a sufficient number of them to keep the roads in shape. The roads are repaired in this way: They cut down trees like the rock elm and cut the wood into cordwood lengths and place that on the ground. Over that they place red sand, and over that in the centre, they have what they call pave blocks, granite blocks, about 6 x 8 x 4 inches. These roads are well drained; the ditches are often 6, 8 and 10 feet deep. Whenever one of these blocks becomes depressed, they put a crow-bar under it and raise it up and put clay under. They throw this red sand over the road on Monday, on Tuesday they take brooms made of brush and sweep it off; on Wednesday they throw it over the side of the road, and on Thursday they throw it over the ditch. On Friday they take a holiday and rest on Saturday and Sunday, and then on Monday they haul it on again. (Laughter.)

All work on roads within three miles of the trenches is stopped during the day time, and the work has to be done at night. If you are going along one of these roads with a G. S. wagon, and one of these granite blocks has gone down, you will

get into a hole that it is difficult to get out of. The nearer you get to the trenches the worse the roads are. I was going up one morning from Dickiebusch to Vierstrat. This was on a road that was shelled a good deal, and it was, as usual, covered with sloppy mud. I happened to have on my waders. There was an English officer coming down the road; he was very stout weighing about 220 pounds. He had evidently come out of the trenches and he had his waders turned down. I noticed a couple of soldiers watching him, and soon he went into a hole up to his neck. When he came out he was minus one of his rubber boots. One of the soldiers said, "Never mind, sir, it will soon be filled up with rubber boots." That hole would probably stay there until night then it would be filled with brush and dirt.

In going up to the town of Ypres from Dickiebusch I found that some large shells had landed in the road, and on account of going through so much stone the holes were not more than six or ten feet deep. I took an entrenching tool and picked down to the bottom, and I could see the substance out of which the road was constructed. There was about 30 inches of solid stone, the bottom was flat stone and there was pave on top. The cordwood had been used on top of the stone for drainage purposes.

About the 1st of May the English army undertook the rebuilding of the roads, and I understand they are now building diagonal roads straight from where the rail heads are to the trenches. The majority of roads in France lead to where the original baron or lord lived, and that was usually on top of a hill and all roads led to that hill. If you wanted to go from Boexhepe to Reninghelst, which is only about a mile and a half, you would have to travel about five miles. The road did not lead from village to village, but from chateau to chateau.

The roads up to within six miles of the line are now being kept in wonderful repair. They found out that it was much easier to build a railway by night than to build roads, and it would pay to bring the rail head closer to the lines. The construction battalion sent over by the C.P.R. very early in the war did a most wonderful feat. They built a road that ends easily within a mile of the German trenches; they did the work at night. The Canadians are all very proud of it, because it was thought that the German flying corps would not permit that road to be constructed. But the Canadian engineers, with their men, built it at night, and they covered it with carpets painted green and brown during the day time, and they were successful in hiding it from the Germans. They did not know it was being constructed until it was nearly finished and then, of course, the Germans shelled it, and several places had to be rebuilt. But having got anything done in that way, you can keep it there. The Englishman sticks by nature; if he gets any place he never backs up. The salient he got into at Ypres must have cost 200,000 lives. Any other nation in the world would have given that up and moved back a mile and a half; but not the Englishman: he never gave up a foot of it, and it is one grave yard from the Town of Kemmel right up to St. Julien.

It gives me a great deal of pleasure to be at this meeting. It gave me a great deal of pleasure to listen to the last address. Four and five years ago we used to talk of what the Minister had said, and that something would happen in the future, and that we could tell our grandchildren that they would have Provincial roads, we never thought we would see them quite so soon. It is hard in a new country to build everything that is necessary for that country. I used to think that the Ontario Government and the Dominion Government did not give as much assistance to the roads as they should, and I am afraid I haven't got over that notion yet.

The campaign carried on by this Association has done a lot of good. I think the older part of the Province of Ontario will get this Provincial highway, and when we get that highway, every farm will increase in value, and the farmer will not be deprived of necessary things as he has been. He will have waterworks in his house, electricity—in fact all the city improvements. He will be able to go from one place to another in comfort and will not be so isolated as he has been. This will have a tendency to get the men back on the farm and keep them there.

ADDRESS

Mr. A. M. Rankin, M.P.P., Toronto

Mr. President and Gentlemen of the Ontario Good Roads Association: It affords me great pleasure to be here this afternoon and to see such a magnificent turnout. In Eastern Ontario we have been discussing good roads for the last six or seven months, and Eastern Ontario had a meeting of all their representatives at the Town of Cobourg, and I had the honour of being one of the members of the committee. We have been working diligently and have circularized all the municipalities throughout Eastern Ontario, and have arranged that to-morrow at eleven o'clock we will meet the Prime Minister. We will meet here at nine o'clock and proceed to the Prime Minister's office, and would like to have everybody who represents a municipality, board of trade, or an automobile club or association sign a memorial which has been prepared to present to the Prime Minister. We in Eastern Ontario are all united on one road. It is the Lake and River Road, and we will be only too glad to have the members from Western Ontario go with us, because we all have the same purpose in mind—that is, a Provincial highway throughout this Province. I thought it only necessary to tell you this so that when you meet here to-morrow, there will be no misunderstanding, and I am sure we will make a wonderful impression on the Prime Minister and show him that it is a live issue and that we are behind it.

We would like all the Wardens of Eastern Ontario to attend a meeting at the Queen's Hotel to-night so as to arrange for our speakers for to-morrow.

I am sure you were all delighted to hear what Major Kennedy had to say. Some of us know what he has gone through in the last six months, and it was, no doubt, a great nervous strain for him to get up and give you an address this afternoon. I was very glad to see the warm reception that you gave him, but it was nothing more than what he was entitled to. He certainly did his share in defence of the country.

There are many things we can say in favour of good roads. There are many things that we have learned and yet there are many things that we have to learn. It has been said that Ontario has been slow in comparison with Quebec and other Provinces, and possibly it is true, but we have before us the experience that they have passed through, and we will not spend the money that they have spent, and if we do spend as much money as they have spent, we will have much superior roads than they have to show for our money.

FIFTH SESSION

Thursday Morning, March 1st, 1917

The President, S. L. SQUIRE, in the Chair.

Proceedings were, by resolution, adjourned, in order that delegates might accompany a deputation from Eastern Ontario to meet the Prime Minister and representatives of the Provincial Government, with respect to the construction of Provincial highways.

CLOSING SESSION

Thursday Afternoon, March 1st, 1917

The President, S. L. SQUIRE, in the Chair.

ADDRESS

By W. A. McLean, Deputy Minister of Highways

Mr. President and Gentlemen: After having spoken at the Opening Session, I hardly feel that I am entitled to further attention from this Convention, but our President called me up on the 'phone a short time ago and urged that I come and say something which might be of interest to you.

From addresses made by members of the deputation this morning, I feel convinced that the idea is getting hold of you that the proposal for a Provincial highway plan is not confined to any single highway in Ontario, but that the whole of Ontario is contemplated as the ultimate field for such a system with the view of serving all parts of Ontario fairly and equally in so far as traffic requirements demand.

It is not, however, upon the subject of the Provincial highways that I wish to dwell this afternoon. Those of you who are here are chiefly interested in county roads; and the plan of improvement in Ontario must take into consideration every part. There is no division that is unimportant. I cannot see that any section or any organization is more important than the other. The township organization is important; townships have their duty. The county organization is equally important, and it has a function to perform.

As stated on Tuesday afternoon, some twenty-four counties have organized fully for construction under the Highway Improvement, or what we may term, the "County Roads Act." Some have been operating since 1902; others—some four—came in last year, and I confidently believe that the year 1917 will see substantial progress in that regard.

The counties that are hesitating are apt to think this is a tremendous undertaking for them; that when they assume a system of highways, it will cost a tremendous sum, and that their people will feel the tax severely. In the first place, we have found in the past three years that there is no undertaking that is too big for the people of this Empire. (Applause.) And there is no undertaking consistent with the size of the community that is too hard for that community to under-

take. Great Britain has done stupendous things—with finance, with Army and Navy organization. If any of you had been told early in the year 1914 that such organization, expenditure, and armament was possible, you would not have believed it. It was inconceivable; and so it is that, as we attempt other undertakings that are desirable, we find that we have the power and the stamina to carry them out. (Applause.)

Counties are apt to over-estimate the seriousness of their undertaking when they assume a system of County highways. They are apt to say, "We are assuming 200 miles of roadway which will cost $2,000, $3,000 or $4,000 per mile, making in all an expenditure of perhaps $500,000 or $600,000"—and they look at the total, and think they must have the full amount in their pocket before they commence their work. That is wholly a mistake. The township that spends $2,000 annually spends $20,000 in ten years; and your county road construction is on the same scale. You cannot expect to carry out your county road construction in one year. Therefore, you do not have to finance it all in one year. If it is extended over ten or twelve years, it is simply the annual cost that you have to meet.

In a pamphlet which we have distributed from our Department, we have shown that any county in Ontario by placing a rate of 1½ mills on their assessment, can couple up with the Provincial subsidy, and in that way, without any serious tax upon their people, provide substantially for the expenditure on their county road construction.

In the meantime the highways are here and you have to maintain them. You are not adding new highways to the ones that already exist; you are simply undertaking to improve them and maintain them according to the traffic that passes over them. That is something, carried on in a sensible way, which every citizen of this country will support.

Our county roads system is misunderstood in other ways. Thus, in the matter of maintenance, we say to the county, "Assume a county road system, appoint your superintendent, appoint your committee of the county council to co-operate with him (as any other committee and officer would co-operate) and from the time you have assumed these highways we will pay you 20 per cent. of the cost of repairing as they are. You do not have to wait until after construction to claim our subsidy for maintenance. I want to make that point perfectly clear. The subsidy for repairing starts at the time you assume the highways, and 20 per cent. is paid on expenditure such as would be classed as "Repairs."

If you see fit to construct a bridge, or a culvert, or to construct a mile or two of highway the first year, you can do so, but the work does not have to be continuous. As you construct, we will pay 40 per cent. of your construction.

The people of Ontario realize that we are now under exceptional circumstances with respect to the war, and they feel that we should not make heavy expenditures on construction, but that we should prepare for after-war conditions. If counties will organize now and undertake to maintain these roads, they will just be properly prepared, when the war is victoriously ended, to carry on their construction next year or the year after. And they will help to employ the men who are returned to us from Europe, and to take care of all possible conditions of unemployment.

I cann t impress upon any county council too strongly that in order to go on with their task, they cannot organize too soon. It requires time to perfect your organization. Have your organization completed so that when the time comes every part of Ontario will be able to do its duty in that regard. This is the feeling that is taking hold of the people throughout Ontario, and they will support their councils in carrying out any such policy.

The people of Ontario have come to the point where they want good roads. There cannot be any two opinions in that regard. The people of Ontario have grasped the fact that the improvement of our highways is the greatest and most important undertaking which we have before us to-day. I do not urge this on you beyond what you conceive to be the sensible course to pursue. I am not here to dictate in any sense to any part of Ontario; but we have undertaken a policy, through the returns from the automobile licenses, of aiding the townships of Ontario to get good roads. The work is carried on under the county councils, but this simply means that expenditure is applied to the most important township roads. We have undertaken this plan of aiding the farmers of Ontario to improve their highways, and the people of every part of Ontario should receive the offered assistance.

Our Department expects to send representatives into every county in Ontario in the near future to discuss with them an organization for carrying out a County Roads System. To have all counties fully organized is the ideal as I have it before me, and fully expect to see it accomplished within a short period.

MR. W. W. ANDERSON, Prince Edward: In the event of a township abolishing statute labour, what percentage would the Government pay of the work done?

MR. MCLEAN: We only aid county road organization. There is no aid in the case of townships which do away with statute labour. What we do is to offer to any township, with or without statute labour, 25 per cent. of the salary of a superintendent, if they will appoint such a superintendent to take charge of their expenditure.

MR. JOHN BRENNEN, Renfrew County: In the event of a county assuming good roads, could we separate ourselves from any part of the county that does not want good roads?

MR. MCLEAN: If there are any single townships in the county that desire to stay out, we can only assume they will stay out temporarily. It is not necessary that they should all be included at first in the county road scheme. There are perhaps some townships in a county which are poor and which properly come under the colonization road scheme.

MR. BRENNEN: That is our case exactly.

MR. MCLEAN: In that case, these townships can be omitted from your county scheme.

ADDRESS

"BENEFITS OF COUNTY ROADS"

By Mr. C. R. Wheelock, C.E., Orangeville

Mr. Chairman and Gentlemen: The subject that has been assigned to me for this afternoon is "The Benefits of County Roads," and I have limited my address almost altogether to the County Roads under the Highway Improvement Act. As there are a number of counties that have not seen their way clear to assume the system of roads under the Highway Improvement Act, being afraid of the financial burden and for other reasons, I have tried to make plain that in a great many cases the burden assumed is very much less than what is generally understood.

Systematic and scientific road building was in practice by the Romans as early as the year 312 B.C. The roads then commenced culminated in a most wonderful

system of stone paved highways stretching from Rome to all parts of the great Empire. This colossal system included 372 roads which are said to have amounted in length to 52,964 Roman miles, or about 48,690 English miles. Many miles of these roads still remain, bearing evidence to the skill of the Romans as permanent road builders.

France and England have admirable systems of paved roads which are the result of a revival in road building which commenced at the beginning of the eighteenth century. The United States began to improve some of her highways about the middle of the eighteenth century, but few paved roads were built for many years. A system of state roads has been commenced in the last decade and is going ahead so rapidly that it threatens to rival the gigantic system of the Roman Empire. And now Canada has entered a good roads era. Progressive legislation has been passed by the Provinces and improved road building encouraged in every way. Ontario has been to the front in the movement and her progressive, intelligent and comprehensive good roads policy has accomplished wonders in a short time.

Byrne in his "Highway Construction" says, "Countries inhabited by the least civilized people, whose wants can be supplied in the immediate vicinity of their dwellings, are almost destitute of roads; hence it has come to be said that roads are the physical symbol by which to measure the progress of any age or people. If the community is stagnant, the condition of the roads will indicate the fact; if they have no roads they are savages."

Before the advent of the motor vehicle, the building and maintenance of rural roads was regarded as solely of rural concern, and the good roads problem was almost entirely a local question. The chief function of the wagon road was to afford transportation between the farm and the nearest market town or railway station. But now the motor truck and the motor car, together with good roads, have brought better markets within reach of the producer and besides a large interurban traffic has been created for the conveyance of both goods and passengers.

The traffic instead of being local as formerly is now very often through traffic or traffic from outside of the municipality. I know some township roads where 75 per cent. of the traffic that passes over them is from outside of the township and, therefore, the road is used and worn out to that extent by people who, under the old system of taxation, would not be paying one cent towards the construction or maintenance. This, of course, is manifestly unfair. The basis of taxation must be that the cost shall be equitably levied on those who benefit. It is now fully conceded that urban municipalities should assume their fair share of the burden.

The Provincial Legislature, as the first step towards meeting the changing conditions, passed the Highway Improvement Act in 1901, and legislation has been added from time to time keeping well up with the progress being made in road building and traffic conditions.

The present legislation provides that a county council may take over from the township authorities for construction and maintenance a system of main or market roads. The Province contributes 40 per cent. of the total expenditure for construction or two-thirds as much as the county; that is, on a total expenditure of $100, the county raises $60 and the Province contributes $40. And for maintenance, the Province contributes 20 per cent. of the total expenditure or quarter as much as the county. The contribution by the Government may be said to come indirectly from the motorists, in license fees, and may be looked upon as the tax paid by them for the use of the roads. The yearly tax for a small car would be $10 and for a big car $30. The average tax for the construction of a county

road system is about 1½ mills on the dollar which would be a yearly tax on the small farmer with a $3,000 farm of $4.50, and on a big farmer with a $10,000 farm of $15. It has been suggested that the money collected for motor licenses in each county be turned over to the county in which it was collected, there to be expended by them on the roads. This would simply be cutting off the amount contributed by urban license holders to support the rural roads; as this would be about 90 per cent. of the total amount collected by the Government for licenses, the change evidently would not work out in the interests of the rural taxpayer. The City of Toronto alone pays about $200,000 for licenses. The total amount collected by the Province last year was about $650,000, and there is no doubt this will soon reach $1,000,000 annually. It is understood that all of this amount will be turned over for the improvement of rural highways under the regulations of the Ontario Highways Department. The present legislation apparently meets with the approval of the majority, twenty-four counties having assumed county road systems under the Highway Improvement Act.

The control of roads by the townships alone has not been satisfactory in building up a system of main market roads suitable for the existing conditions. It has been demonstrated that under the increased traffic, the old roads and the old systems of road building are quite inadequate. It is a well known fact that the roads in townships where there is no county system are deteriorating instead of improving. Main roads that would have stood up fairly well under the traffic of ten years ago, are now worn out in a short time, and when the next best road is picked out, as it was built for even lighter traffic than the first, it wears yet a shorter time, and so what were formerly the best roads of the township soon become the worst. When main roads are properly constructed by the county, they take the bulk of the traffic and allow secondary roads to be built and kept in good repair by the township at a moderate cost. It has been announced by the Minister of Public Works that legislation will be brought down at this session of the Legislature providing for an increased grant for main roads on county systems which take the interurban traffic. This increase is along the right line, and if the grant is increased to about 70 per cent. for construction and the same for maintenance, as we expect it will be, no doubt the good fruits will be soon seen in the construction of a better class of roads and in better maintenance.

The increase of traffic on the highways calls for an increased expenditure, but is a sure sign of the progressiveness and business activity of the community. A road that is not used is merely idle land from which the public derive no revenue or benefit, but an improved road carrying much traffic is a rich asset and its value increases as the traffic increases.

A county road system does not necessarily mean an increased burden for the taxpayer. The roads assumed are, generally speaking, the most heavily travelled township roads, and, therefore, require a considerable expenditure for construction and maintenance in their present state. Suppose such a road is to be improved, and that the township provides the customary amount for township road construction, after this sum has been expended the Government steps in and says, "This road is hardly good enough to carry the traffic, we will add 66⅔ per cent. to the sum you have raised which will be sufficient to make a first-class road of it." It is evident that in this case the improved road would be built without extra cost to the township, and in some cases this would apply. And besides for bridges and culverts built on the township road, the township would have to pay the full amount of the cost, so it is evident there is a straight saving to the municipality of 40 per

cent. of the total expenditure for bridges and culverts built on county roads. A further saving to the township would result from the decreased cost of maintenance of other roads from which the traffic would be drawn to the improved road. And as the Act now provides for the maintenance of winter roads, the public have the advantage of a good road throughout the whole year.

The regulations of the Highway Department are most reasonable. They do not insist on any particular class of road, only that the road shall be suitable for the traffic. The most economical road which can be built is the road that is suitable for the traffic that passes over it, this may be anything from an ordinary earth road to a concrete or brick road. The Department does, however, insist that the roads shall be properly constructed from the foundation to the surface, which is undoubtedly a wise provision and the most economical kind of construction. Road superintendents are instructed in all the principles of road building. An annual conference on road construction for county superintendents and engineers is held at the Parliament Buildings, Toronto. The experience and advice of the engineers of the Highway Department, under the able supervision of W. A. McLean, Deputy Minister of Highways, and Geo. Hogarth, Chief Engineer, is cheerfully given at all times. This assistance is very helpful to the road superintendents and is much appreciated by them. Road building is a science and the road built under the supervision of a trained and experienced road builder must give the best results.

There is no better proof of the benefits of county roads than the fact that in counties where they have been tried out, the ratepayers are eager to have the systems extended. In the County of Peel, where county roads were assumed ten years ago, many miles have been added to the system first adopted, and the ratepayers are still asking for more. A short time ago a subscription list was started in the north part of the County and was headed by the owner of a 100 acre farm, with a subscription of $500 to be given to the municipality on condition that the main highway which runs past his property would be assumed as a county road and built in accordance with the regulations.

There seems to be in some localities a most exaggerated idea of the increased burden assumed by the ratepayers with a county system of roads. I have endeavoured to correct some of the misconceptions in connection with this matter and to point out the many advantages accruing to the township municipality. The benefits have been considered from the viewpoint of the municipality only, but besides there are the many benefits to the individual such as:—

Increase in the value of property.

Decrease in cost of haulage.

A wider choice of markets.

The marketing of produce at the most favourable times.

And the promotion of social and intellectual intercourse between members of rural communities and also between rural and urban population. (Applause.)

AUDITORS' REPORT

Read by Mr. George S. Henry, M.P.P., Secretary

Receipts.

Balance from 1916		$296 82
Good Roads Educational Association, balance of funds turned over		391 34
Interest from bank		6 66
Extra grant from Provincial Government		100 00
Interest from bank		7 34
Provincial Government grant	$400 00	
Stormont, Dundas and Glengarry	15 00	
Lennox and Addington	15 00	
Huron	15 00	
Sarnia Township	5 00	
Victoria County	15 00	
Brant	15 00	
Hastings	15 00	
Simcoe	15 00	
Carleton	15 00	
Peel	15 00	
Norfolk	15 00	
Prince Edward	15 00	
Dufferin	15 00	
Wentworth	15 00	
Elgin	15 00	
Welland	15 00	
Essex	15 00	
Perth	15 00	
Kent	15 00	
City of Belleville	25 00	
York	15 00	
York Township	5 00	
Windsor City	25 00	
Middlesex	15 00	
Oakland Township	5 00	
City of Woodstock	25 00	
Town of Walkerville	10 00	
		$00 00
		$1,602 16

Disbursements.

June the 2nd, 1916:	
Executive Expenses, May	$90 20
June the 6th, 1916:	
Executive Expenses, June	99 00
Montreal Convention Expense	65 00
Publicity Campaign	27 00
November the 21st, 1916:	
Executive Expense, November	83 25
Ottawa Expense, Secretary	15 00
Publicity Campaign	84 00
Postage, etc.	5 00
June the 19th, 1917:	
Convention Expense, Toronto	36 00
Cash in Bank	1,097 71
	1,602 16

Moved by Mr. Ketcheson, seconded by Mr. Anderson, that the report be received and adopted. Carried.

RESOLUTIONS

That the Minister of Public Works and Highways be earnestly requested to amend the Highway Improvement Act so that the Province will pay 40 per cent. of the cost of all highways constructed under that Act.

That this Association approves of the construction and maintenance of a permanent highway from the Quebec line to Windsor, by the Provincial Government of Ontario, believing it to be the only method for undertaking a work of such magnitude, and that this Association request the Minister of Public Highways to introduce the necessary legislation, the work to be undertaken as soon as the conditions of the labour market permit.

That the Province be requested to pay 40 per cent. of the maintenance of highways.

That we approve of the action of the Highways Department in providing for the testing of road making material and research work with reference to methods of construction suited to modern traffic.

That this Association approves of the application of the fund created by automobile licenses for the construction of County and Provincial Highways.

That employment should be found for returned soldiers and others during the period of readjustment after the war by the co-operation of Federal, Provincial and Municipal authorities in the construction of highways and other public works, and that a comprehensive scheme should be outlined without delay.

That in the opinion of this Association the plans for the Interprovincial Highway from Windsor to Montreal should include a branch road to some point on the Niagara River.

That this Association is in favour of legislation to give municipalities and counties power to regulate and restrict the weight of loads that may be drawn over highways under their control at certain seasons of the year.

That in the opinion of this Association, paving brick should be placed on the free list the same as asphalt paving material.

That this Association memorialize the Legislature to increase the grant on main roads on County Road systems which take interurban or long distance traffic, to 75 per cent. for construction and the same for maintenance.

That the Ontario Highway Act, in so far as it pertains to the suburban area, be amended by making it compulsory for cities to adopt the scheme within thirty days after the county appoints their representatives on the Commission and notifies the City and Department of Highways of their action, and that the section which requires the consent of the Lieutenant-Governor be struck out of the Act.

That this Association is in favour of legislation to give municipalities and counties power to regulate and restrict the weight of loads that may be drawn over highways under their control at certain seasons of the year.

That the Association memorialize the Government to reduce the duty on glazed tile to the same rate as is now charged on imports of unglazed clay tile.

That in the opinion of this Association a vote of two-thirds of the members of a County Council should be all that is necessary to bring into effect the Highway Act in a County.

RESOLUTION OF CONDOLENCE

To the President of the Ontario Good Roads Association:

Your Committee appointed to draft a resolution of condolence in reference to our departed members, beg to submit the following resolution:

Whereas, since our last meeting, it has pleased Almighty God to remove by the hand of death four valued members of the Ontario Good Roads Association, J. F. Beam, of Welland County, the original pioneer of the Good Roads movement, who attended the various sessions of the Association since its organization in 1894, and to whom we are indebted for many valuable suggestions and assistance; Major James Sheppard, of Queenston, who developed an ability in the pioneer work of the Association that attracted a demand for his services throughout Canada and was at the time of his death Superintendent of Roads in the County of Welland; H. J. Bowman, County Clerk, Treasurer and Engineer of the County of Waterloo, whose experience was always at the service of the Good Roads movement throughout the Province, and whose wise counsel was most appreciated at our meetings; Arthur M. Chapman, County Clerk of Hastings and Clerk of Sidney, whose fine personality and ability as a municipal executive was ever on the side of progressive movement of which this one is but an example,

Be it therefore resolved, that the members of this Association, while expressing their regret remember those whose loss and sorrow is so much greater, and that the President and Secretary forward a copy of this resolution to the families of our departed associates.

F. A. SENECAL,
Chairman.

REPORT

OF THE

Minister of Education

Province of Ontario

FOR THE YEAR

1916

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:

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1917

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REPORT

OF THE

MINISTER OF EDUCATION

FOR THE YEAR 1916

To His Honour

COLONEL THE HONOURABLE SIR JOHN S. HENDRIE, K.C.M.G., C.V.O., etc.,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I present to Your Honour the Report of the Department of Education for the year 1916. It includes the school statistics for the calendar year 1915 and the usual reports from certain officials connected with the educational work of the Province.

The War and the Schools

It is a source of pride and satisfaction to me to be able to report once more that the educational system of Ontario, despite the strain and sacrifice entailed by the Great War on all classes of our people, is in a sound and flourishing condition. Not only have the male teachers enlisted freely in defence of the Empire, as will be seen in the list appended to this report, but the total number of such enlistments is creditable considering the small proportion of men in the teaching profession and the fact that many more who desired to offer their services have been prevented by age, by physical disability, or by special circumstances. It should be noted that the women teachers have done their part with zeal and fidelity by exertions in behalf of various forms of patriotic work, and in addition have carried out successfully the duties of teaching the war in the classes according to the programme laid down in the Regulations.

The gallantry and fortitude shown by Canadian soldiers on the battlefields bear testimony both to the noble example set by our teachers during many years and to the efficiency of their instruction in the virtues of courage, faith and loyalty. The people of Ontario will not forget the share taken by the schools in preparing the youth of the country in mind and character, to meet and sustain the severe test imposed by the war.

Pupils and Farm Production

That the war has occasioned some dislocation in school work was to be expected. The provision made in 1916 to withdraw pupils of suitable age from school to assist in the work of the farms of the Province has been continued during the present school year. The necessity of maintaining and increasing the production of food as an important factor in winning the war is the justification for this exceptional measure. It is the duty of the Department to see that the education of the young is not interfered with to any greater degree than is absolutely required for the purpose in view. When the war ends the pupils now in the higher classes of the schools must face the battle of life under conditions which will demand the best training if they are to succeed. The Department feels that it should have the support of the community in providing a curtailment of school courses for those only who can actually assist in farming operations for the increase of production and in preventing the abuse of a privilege which might work lasting injury to the present generation of pupils. The number of candidates recommended in 1916 for promotion and for certificates by school Principals in accordance with the provisions made was 2,028, and it is probable that the number so recommended in 1917, under the amended Regulations, will be considerably larger.

The Supply of Text-Books

The Department has found itself confronted with a problem of unusual difficulty in connection with the supply of text-books. The prices of paper and of all other materials entering into the manufacture of books, have increased, from various causes, to almost unprecedented figures. The control or regulation of the supply of so necessary an article as paper in carrying on the work of the schools is not within provincial jurisdiction. The attention of the Federal authorities has been called to the serious situation now existing. To impose an additional burden upon parents at this juncture, in the shape of higher prices for text-books, is something to be avoided by any practicable measure. The supply as well as the cost of text-books would be placed in jeopardy should existing conditions grow more acute, and to resort to a foreign country for the production of books hitherto issued here would be detrimental not only to the domestic publishing firms, but injurious to the interests of the labour which is equally concerned in the preservation of the book-making industry at home. Schoolbooks, however, have, in my opinion, a claim for consideration superior to other forms of publication, and any serious interruption to their production is not to be contemplated. Pending such action as may be possible by the Federal authorities, I am conferring with the publishers of books, the contracts for which expire in the month of June, 1917, and which it is desirable to continue for at least another year. I believe that the publishers will face the whole situation in a spirit of fairness and with a recognition of the patriotic needs of the time. In any event the prices of former text-books calling for renewal will not be increased during the school year 1917-1918.

The Elementary Schools

The school statistics for 1915 which appear in detail in this report furnish tangible evidence of the growth of the educational system. In connection with the elementary schools three factors of marked significance are pre-eminent:

increased attendance, the larger number of more highly trained teachers employed, and the continued rise in the salary scale. The enrolled attendance was 58,580 more than in 1905, and the increase in 1915 is true of both rural and urban schools. During the ten-year period, 1905 to 1915, the average salary, taking rural and urban schools together, has increased from $514 for male teachers and $348 for female teachers to $902 and $613 respectively. The facts may be briefly summarized in the following table:

—	1905		1914		1915		Increase for ten years	
	Male	Female	Male	Female	Male	Female	Male	Female
	$	$	$	$	$	$	$	$
Rural Schools	402	311	614	543	621	549	219	238
Urban Schools	800	413	1276	686	1310	696	510	283
All Schools	514	348	875	604	902	613	388	265

The total school expenditure during the ten years period has increased from $6,161,236 to $14,267,476. The amount paid in salaries has increased from $3,669,230 to $7,614,110. The Legislative grants have risen from $414,004 in 1905 to $849,872 in 1915.

The employment of teachers with higher certificates is another striking proof of educational progress. In 1915 there were 11,850 teachers in the elementary schools exclusive of kindergarten and night school teachers. More than eight thousand of these have received Normal School training and more than one thousand hold first class certificates. The improvement in ten years may be set forth as follows:

—	First Class	Second Class	Third Class	Others
1905	580	4018	3248	1722
1914	878	7387	1771	1510
1915	1051	8025	1520	1254

These statistics for the decade under review show that the number of teachers with first class and second class certificates has almost exactly doubled and that teachers with lower grade certificates have decreased in number from about 5,000 in 1905 to about 2,700 in 1915. This is a remarkable proof, if such were needed, that the substitution of Normal trained for Model trained teachers has been successful. The reports from inspectors to county councils and to this Department record the satisfaction with which the change is regarded, indicating as it does that the work of the elementary schools is carried on with greater efficiency than during the previous decade. The supply of teachers shows no signs of falling below the number required annually. There were under training in January, 1917, in the seven Normal Schools of the Province, 1,266 students, of whom 1,129 were women and 137 were men. In addition, 27 students were

taking the kindergarten-primary course at the Toronto Normal School. The attendance at each school at the date named was:

Hamilton	192	Ottawa	185
London	189	Peterborough	176
North Bay	125	Stratford	163
Toronto	236		

In order to prevent overcrowding in any school and to equalize the attendance so as to obtain the best educational results it is necessary to enforce the Regulation requiring students to attend the school situated nearest their own homes.

The elementary schools, which are attended by the vast majority of the pupils, show in many respects a steady average improvement. While there are districts which do not exhibit any unusual progress, there is, on the whole, a gratifying upward tendency. The war has given a marked stimulus to the work done in history, geography and literature. The teachers have been diligent in inculcating the lessons of patriotism illustrated so potently by the great trial through which the British Empire is passing in its splendid effort on behalf of liberty, humanity, and civilization. Wherever possible the erection of new school buildings has been postponed until the war is over.

Continuation Schools

There are at present 132 Continuation Schools in the Province and the work done in them, as will be seen in the reports of the inspectors, ensures their hold upon the localities which they serve. The expenditures in 1915 amounted to $310,794 as compared with $294,125 in the previous year. The amount spent in teachers' salaries was $219,660 as compared with $208,386. The enrolled attendance increased from 6,069 to 6,800. Nearly half the pupils are the sons and daughters of farmers. There are 238 teachers in these Continuation Schools, 68 per cent. women and 32 per cent. men. The average salaries of the assistants remain practically stationary while that of the principals decreased by $13. The average salaries are $1,086 for principals, $742 for women assistants and $708 for men assistants. Ten years ago the average salary for all teachers in Continuation Schools was $573.

High Schools and Collegiate Institutes

The 160 High Schools and Collegiate Institutes had an enrolled attendance of 38,426 pupils in 1915, or 1,960 more than in the preceding year. The total expenditure amounted to $2,470,974. The cost per pupil for teachers' salaries decreased from $40.49 to $38.32, other maintenance expenses from $17.35 to $14.30, while the expenditure on sites and buildings decreased from $36.62 to $11.68 per pupil owing chiefly to the practical completion in the preceding year of large buildings in the City of Toronto the cost of which was included in the statistics of that year. The attendance was derived from the following classes in the proportions stated below: Commercial, 21.86 per cent.; Agriculture, 28.88; Law, Medicine and the Church, 5.49; Teaching, 1.74; the Trades, 18.78; Labouring occupations, 7.67; and other classes, 15.57.

In these schools there are 1,020 teachers, 55 per cent. men and 45 per cent. women. Ten years ago the percentages were 77 and 23 respectively. At that time the average salaries were $1,303 for principals, $1,091 for men assistants

and $762 for women assistants. They are now $1,813, $1,634 and $1,109 respectively. These salaries, however, show a decrease of $23 in the case of principals and $2 in the case of men assistants as compared with the preceding year. The women received an average increase for the year of $5.

The great advance made by these secondary schools in the past decade may be seen in the following table:

Year	Schools	Teachers	Attendance	Teachers' salaries	Government Grants	Value of Equipment	Total Expenditure
				$	$	$	$
1905....	140	689	28,661	666,547	154,953	256,815	1,004,498
1915....	160	1,020	38,426	1,472,673	191,374	715,175	2,470,974

Pensions for Teachers

A measure providing superannuation allowances for the teachers of Ontario is now before the Legislature and should become law in the near future. There is a well-founded belief that legislation of this kind will do much to impart stability to the teaching profession and to retain within its ranks a due proportion of male teachers. A difference of opinion has existed and probably still exists, among the younger teachers as to whether or not they should contribute any portion of their salaries toward superannuation allowances. This opinion, natural enough on the part of those who have no desire to make teaching their life calling, has been given the consideration it deserves, and the bill provides for the return of contributions to those who have taught at least five years. I wish to bear testimony to the unselfish and enlightened attitude of the teachers as a body in accepting cheerfully their share of the obligations which are imposed upon them and upon the Province by the bill. Amendments to it may be required from time to time, as experience may suggest, and the Department will have from the first the assistance of an advisory commission, with representatives of the teachers upon it, in the administration of the law. The adoption of this measure may well be regarded as marking an important stage in the educational progress of Ontario.

Provincial Control of Schools

The decision of the Imperial Privy Council, in the appeals arising out of the Ottawa Separate School Board litigation, has confirmed the judgments previously rendered by the Courts of Ontario that the Legislature has complete control over the administration of all schools in the state system. That any other view could be taken of the rights and powers of the Province over its own schools is difficult to imagine. Obedience to properly constituted authority and respect for law are the fundamental principles of the British system of government the world over, and this Province having decided many years ago that elementary education is compulsory, the manner and the form in which this law shall be framed are clearly within the competence of the Legislature and should be obeyed by school boards. This policy the Department of Education must carry out so that the public interest in adequate elementary training for all future citizens may be fully main-

tained. The necessity of imparting a knowledge of the English language, which is the only official language of Ontario, to all pupils in the schools of the state, does not admit of doubt or argument. The Legislature having unanimously affirmed this policy and having declared that English is the language of the schools, the duty of the Department is plain. The law can be enforced without injury to the feelings, prejudices, or preferences of any element in the Province, and it is by this spirit that the administration of education should be, and is, inspired. The Imperial Privy Council having also decided that the Act to administer the Ottawa separate schools was defective in some respects, these defects will be remedied in accordance with the judgment of the highest court and the law re-enacted.

Schools for Deaf and Blind Children

The reports of the Ontario School for the Deaf at Belleville and the Ontario School for the Blind at Brantford will be found in the appendices. The attendance at the Belleville school is the largest in the history of the school, namely, 143 boys and 132 girls. The work of the classes is highly satisfactory and the training of the pupils in oral methods continues to produce good results. The supply of teachers has been rendered more difficult by the enlistment for the war of two members of the staff, and the illness of others. As the teachers of deaf children require special training not needed by teachers of pupils who can hear, the problem of staffing this school is always exceptional. The Principal, Dr. Coughlin, has met the situation successfully, and the impression produced by the work of the school upon competent instructors in our public schools, like the members of the Frontenac and Kingston Teachers' Institutes, whose visit is recorded in the Principal's report, illustrates the efforts being made to keep up the standard of training and to fit the pupils, as far as possible, to take their places as ordinary members of the community.

The resignation of Principal Gardiner of the School for the Blind in July, 1916, after a long term of service, owing to a desire to resume his literary work during the closing years of his career, furnished the occasion for a thorough enquiry into the work of this school with a view to making such changes in the administration, discipline and branches of training as might be required. A commissioner with the necessary powers was appointed and the person selected, Mr. Norman B. Gash, K.C., of Toronto, investigated the conditions, upon which he has recently reported after full investigation of the school and similar schools in the United States. Before this inquiry could be finished, action was required and it was decided to place the school for the time being more directly under the control of the Department. The Deputy Minister was accordingly instructed to exercise personal supervision of the school and Mr. Clarkson W. James, Departmental Secretary, was appointed Acting Principal. This arrangement has worked well. Changes in the teaching staff, additions to the equipment, and enlargement of the courses for vocational training have been made. The discipline of the pupils is much more satisfactory and the work of the school is progressing well. The Government has invited Sir Charles Fraser, Principal of the Halifax School for the Blind, and justly noted for his experience and success in the education of blind persons, to visit Brantford as the guest of the Province, in order that his advice may be available in the complete re-organization of the school. The invitation has been accepted.

Industrial and Technical Training

An instructive survey of the progress made by Ontario during the past five years in industrial and technical education will be found in the report of Dr. F. W. Merchant, Director of Industrial and Technical Education. The Superintendent of Education, Dr. John Seath, was instructed in 1909 to investigate and report upon the systems of technical education in the chief countries of Europe and in the United States. Based upon the elaborate and valuable report made by him in due course the Industrial Education Act of 1911 was passed. The municipalities were empowered to establish schools for such instruction and to provide for them by taxation. Provision was subsequently made for assistance in the shape of Legislative grants. The expansion has been remarkable. Thus far 42 have been established. Only two urban municipalities where the population exceeds 8,000 have not established schools and most of the small towns that are industrial centres have taken action. There are seven day schools, four being full time industrial schools, and three technical departments of high schools. The attendance of pupils this year exceeds 20,000, despite the war which has greatly interfered with the attendance. The total grants by the Legislature for industrial classes amount now to $211,548. The future progress of the system throughout the Province depends in considerable measure upon the prospect of federal grants following the precedent set in the grants already paid to encourage agricultural training. The whole problem is discussed in his report by Dr. Merchant with special reference to its bearing upon national conservation, the need of providing education for the young after the age of 14, and the urgency of vocational training if the state is to make the best use of its resources. To the conclusions thus stated, I adhere and, as on former occasions, express the hope that the National Government, occupied as it is with the pressing burden of the war, will yet find the time and opportunity to encourage a form of educational development of vital consequence to the future of Canada.

Agricultural Training

The efforts of the Department to give the teaching of agriculture its rightful place in the schools are being energetically carried out by Dr. Dandeno, the Inspector of Elementary Agricultural Classes and his report shows that satisfactory progress is being made. The field of work is extensive and there are many obstacles to a complete realization by the people at large of what the subject means to the welfare of the Province. The providing of teachers qualified to do the work, the adjustments of the school curricula, the co-operation of the trustees and parents and the promotion of intelligent public opinion which is so valuable in all branches of education, call for time and patience. In the meantime the practical projects comprised in school and home gardens, school fairs, and experimental work of every sort arising out of the course in nature study are being encouraged with success and the portion of the federal grant assigned to this Department is being employed to good purpose. The extension of the course given to teachers-in-training in the Normal Schools must, when greenhouses are provided, greatly tend to qualify teachers for carrying on the work in the schools. The release of pupils from the high schools to help in farm production during the war, to which allusion has already been made, serves to impress upon the Province the fact that agriculture is the basis of its prosperity and that a knowledge of the subject is of value to all, even to those whose lot is cast in urban centres.

Public Libraries

The success of the Public Library movement continues under the new Inspector, Mr. W. O. Carson, and his report shows that here too the war has had a stimulating and not a depressing effect. The importance of special training for library workers will be emphasized in future and better facilities provided for the Provincial training school conducted by the Department.

Enlisted Teachers

I append a list of the teachers, as far as obtainable, who have joined the army, including the names of those who have already given up their lives for the Empire.

Respectfully submitted,

R. A. PYNE,

Minister of Education.

March 1st, 1917.

ONTARIO TEACHERS WHO HAVE ENLISTED FOR OVERSEAS SERVICE

According to the reports received to date from Inspectors and Principals, teachers have enlisted for Overseas Service from the several grades of schools, as follows:

Those who have made the Supreme Sacrifice:	
High Schools	2
Public Schools	6
Total	8
Other Enlistments Reported:	
High Schools	62
Public Schools	286
Normal School Students who did not complete their Courses	27
Special and Temporary Teachers	21
Total	404

Teachers Reported "Killed in Action" or "Missing"

According to the reports received at the Department, the following teachers, on active service, have made the Supreme Sacrifice:

Name.	Cert.	School Where Last Engaged	Report
Charlton, Wm. L.	I	S. S. No. 7, McGillivray	Killed, Belgium, 20/7/16.
Chidley, Philip F.	II	Student, North Bay, N.S.	Killed, 25/4/16.
Ferguson, Wilbert R.	II	Student, North Bay, N.S.	Killed, Zillabeke, 3/6/16.
Govenlock, Thos. E.	H.S.A.	St. Catharines C. I.	Killed, Courcelette, 30/9/16.
Kerr, Frank L.	II	Student, North Bay, N.S.	Killed, Somme, Sept., 1916.
Lee, Harry E.	I	Annette St., Toronto	Killed, October, 1916.
Metcalfe, Geo. A.	II	S. S. No. 2, Neelon	Killed, June, 1915.
Wood, F. H.	Spec., Pr.	Malvern Ave. C. I., Toronto.	Reported Missing, 12/6/16.

High and Continuation School Teachers who have Enlisted for Overseas Service

Name	Cert.	School Where Last Engaged	Overseas Record
Amos, H. E., B.A., D. Pæd.	H.S.A.	Grimsby H. S. (Prin.)	
Atkinson, W. D. T., B.A.	Spec.	Collingwood C. I.	
Bramfitt, Geo. N.	H.S.A.	University Schools, Toronto.	
Brokenshire, M. C.	H.S.A.	Lindsay C. I.	
Brown, Arthur R.	H.S.A.	Watford H. S.	
Butson, Wm. G.	H.S.A.	Bowmanville H. S.	
Carter, Chetwynd S.	H.S.A.	Lakefield C. S. (Prin.)	
Cline, Geo. A., B.A.	Spec.	University Schools, Toronto.	Awarded Legion of Honour.

High and Continuation School Teachers who Have Enlisted for Overseas Service.—Con.

Name	Cert.	School where last engaged	Overseas Record
Cook, Leslie B.	H.S.A.	Sarnia C. I.	Wounded, Somme, 8/9/16.
Cowles, John P., B.A.	H.S. Pr.	Dunnville H. S. (Prin.)	
Crerar, John S., B.A.	H.S. Pr.	Port Rowan H. S. (Prin.)	
Currie, John E.	H.S.A.	Bruce Mines C. S. (Prin.)	
Day, John W.	H.S.A.	Stratford C. I.	
Dunkley, A. W., M.A.	Spec.	Oakwood C. I., Toronto	
Ewing, Chas., M.A.	H.S.A.	Wingham H. S.	
Fielding, E.L., B.A.	H.S.A.	Brantford C. I.	
Foley, Roy S., B.A.	H.S.A.	Central Technical, Toronto	
Glenn, E. H.	H.S.A.	Grand Valley C. S. (Prin.)	
Grandy, Frederick N.	H.S.A.	Barrie C. I.	
Griffin, Selwyn P., B.A.	H.S.A.	Harbord C. I., Toronto	
Hagarty, E. W., M.A.	Spec.	do C. I., Toronto (Prin.) (Returned to Teaching)	
Hartry, R. R.	H.S.A., M.T.	Chatham C. I.	
Harvey, J. Irvine	H.S.A.	Chatham C. I.	
Hill, Kenneth S., B.A.	H.S.A.	Madoc H. S.	
Hiscox, Wm. F.	H.S.A.	Stratford C. I.	
Hughes, Hugh L.	H.S.A.	Princeton C. S. (Prin.)	
Jackson, J. Sandfield, B.A.	Spec.	Listowel H. S.	
Jeffrey, H. G. S.	H.S.A.	Streetsville H. S.	
Jenkins, Jas. T., B.A.	Spec.	Oakwood C. I., Toronto	
Jewitt, Oliver V., B.A.	Spec.	Chatham C. I.	
Jolliffe, Ernest H., B.A.	H.S.A.	Cen. Technical Sch., Toronto	
Keith, Geo. W., B.A.	Spec.	Parkdale C. I., Toronto	
Lamb, Walter J., M.A.	Spec.	Harbord C. I., Toronto	
Lower, A. R. M., B.A.	Spec.	University Schools, Toronto.	
McCamus, Wm. R., B.A.	Spec.	Leamington H. S.	
McDonald, Jas. H., B.A.	H.S.A.	Almonte H. S.	
McGarvin, M. J., B.A.	Spec.	Hamilton C. I.	
McLellan, J. A.	H.S.A.	Kenora H. S.	
McQuarrie, Geo. B., M.A.	Spec.	Oakwood C. I., Toronto	
McQueen, James	Spec.	Cen. Technical Sch., Toronto.	
Manning, Harold G., B.A.	Spec.	University Schools, Toronto.	
Marshall, Geo. A.	H.S.A.	Galt C. I.	
Michell, Wm. C., B.A.	Spec.	Riverdale C. I., Tor'to (Prin.)	
Nesbitt, Robt. N.	H.S.A.	St. Catharines C. I.	
O'Neill, A. E., B.A.	Spec.	Lindsay C. I.	
Odell, J. W., B.A.	Spec.	Cobourg C. I.	
Osborne, Baron	Phys. Dir.	Kitchener C. I.	
Pentland, Geo. E., M.A.	Spec.	Beamsville H. S. (Prin.)	
Rochat, Paul, M.A.	H.S.A.	Harbord C. I., Toronto	Croix de Guerre, wounded, Nov., 1914.
Shier, Walter	H.S.A.	Leamington H. S.	
Snider, Egerton E., B.A.	Spec.	Port Hope H. S. (Prin.)	
Spencer, Watson G., B.A.	H.S.A.	Sudbury H. S.	
Staples, Wm. E., B.A.	H.S.A.	Guelph C. I.	
Symington, Jas. B.	H.S.A.	Napanee C. I.	
Tanton, Francis	H.S.A.	Ingersoll C. I.	
Tanton, John, B.A.	Spec.	Mt. Albert C. S. (Prin.)	
Wallace, Andrew	H.S.A.	Sarnia C. I.	
Watson, E. H. A., B.A.	Spec.	Riverdale C. I., Toronto	
White, Orville R.	H.S.A.	Goderich C. I.	
Willoughby, H. A. G., M.A.	Spec.	Chatham C. I.	
Worden, Ernest	H.S.A.	Guelph, C. I.	
Wright, Wm. J., M.A.	Spec.	St. Mary's C. I. (Prin.)	

Public School Teachers who have Enlisted for Overseas Service

Name	Cert.	School where last engaged	Overseas Record
Adams, Robt. L.	II	Student, Hamilton N. S.	
Aiken, A. W.	II	S.S. 1, St. Joseph	
Anderson, Fred. F.	II	Student, North Bay N. S.	
Archibald, A. W.	I	Dufferin, Toronto	
Archibald, S. W.	I	Massey	
Armstrong, H. E.	I	Carlton, Toronto	
Atkinson, W. L.	I	Brock Avenue, Toronto	
Atkinson, Wm.	II	S.S. 3, Buchanan	
Baker, Albert L.	II	Student, London N. S.	
Baker, Elmer B.	II	Student, Ottawa N. S.	
Barber, Percy L.	I	Essex Street, Toronto	Wounded Somme, Sept. 15, 1916.
Barragar, David	II	Queen Mary, Belleville	
Bean, Howard	II	Breslau	
Bell, Alex. M.	III	S.S. 4, Egremont	
Bell, James Gilbert	III	Student, North Bay N. S.	
Bennie, Robt. E.	III	S.S. No. 4, Pelee Island	
Betterley, A. C.	II	Saskatchewan	
Bigelow, Lewis H.	III	Student, Peterborough N. S.	
Bingle, Thos.	II	King George, Brantford	
Blaney, Robert	II	Frankland, Toronto	
Bonham, Robert L.	II	Alberton	
Boothby, Royal A.	II	Student, Hamilton N. S.	
Boulding, Chas. R.	I	Alexander Muir, Toronto	
Brown, Fred.	II	Havelock	
Buchanan, Wm. P.	I	Carlton, Toronto	
Burns, John Ed.	II	S.S. No. 8, Herschel	
Burt, Arthur C.	II	Essex Street, Toronto	
Byrnes, Chas. F.	II	S.S. No. 3, S. Himsworth	
Call, George W.	II	Dickson, Galt	
Cameron, Ewart D.	III	S.S. No. 4, Huron	
Cameron, Robert C.	I	Winchester Street, Toronto	
Campbell, E. Grant	III	S.S. No. 6, North Cayuga	
Campbell, Goldie T.	Dist.	S.S. No. 5, Tudor Lake	Twice slightly wounded.
Campbell, Gordon A.	II	S.S. No. 5, Ancaster	
Campbell, R. J.	II	Petrolea (Returned to teaching)	
Campbell, Wilfred A.	II	Student, London N. S.	
Cannon, Gerald Wm.	III	S.S. No. 2, Ryerson	
Carpenter, T. T.	M.T.	Manning Avenue, Toronto	
Carr, James B.	II	S.S. No. 2, Scott	
Carruthers, O. K.	I	Manning Avenue, Toronto	
Cavanagh, Wm. R.	I	Balaclava, St. Thomas	
Champagne, Elmo E.	II	Hammond	
Chard, Tom	III	S.S. No. 17, Artemesia	
Christie, Oliver	II	Student, North Bay N. S.	
Clark, Alan	II	Student, Toronto N. S.	
Clark, William	I	Frankland, Toronto	
Collier, Wm. Benson	II	Queen Mary, Hamilton	
Conover, Reginald	II	S.S. No. 9, Nottawasaga	
Copp, Leo W.	II	S.S. No. 5, Smith	
Corneil, Fred. M.	II	S.S. No. 2, Cavan	
Cousins, Archie R.	II	Student, Hamilton N. S.	
Coutts, Wallace M.	II	S.S. No. 3, Tossorontio	
Craig, J. J.	Insp.	Wellington Co., South (Returned to inspectoral duties)	
Cullis, John T.	II	S.S. No. 2, Harvey	
Daniel, T. Edward	I	Dewson School, Toronto	

Public School Teachers who have Enlisted for Overseas Service—Continued

Name.	Cert.	School where last engaged.	Overseas Record.
Davey, Stanley H.	II	Student, Hamilton N. S.	
Davis, Melville, B.A.	III	S.S. No. 7, Lochiel	
Day, Cyrus F.	II	S.S. No. 2, 11 East Zorra	
De Cou, Edward	III	S.S. No. 4, Belmont	
Dewart, John A.	II	S.S. No. 4, Stamford	
Dickson, Arch. C.	I	Grace Street, Toronto	
Dickson, Frank	II	King Edward, Brantford	Seriously wounded Dec. 15, 1916.
Doherty, W. J.	I	Givens Street, Toronto	
Doran, Frank B.	II	S.S. No. 2, Matilda	
Dougall, Roswell P. L.	II	U.S.S. No. 1, Hay & Stanley.	
Drew, O. Cecil	I	Woodville	
Dudgeon, Clarence A.	II	Student, North Bay N. S.	
Duffin, Freeman J.	III	S.S. No. 6, Widdifeld	
Dunlop, John J.	III	S.S. No. 6, Charlottenburgh	
Durst, Wilfrid	III	S.S. No. 8, Sullivan	
Eaid, Chas. R.	II	Alex. Muir, Sault Ste. Marie.	Discharged — developed tuberculosis.
Elliott, Arthur	I	Pape Avenue, Toronto	Wounded Courcelette — invalided home.
Elliott, Fred. W.	I	Bolton Avenue, Toronto	Shell shock, Courcelette.
Elliot, Wm. Ralph	III	S.S. No. 2, Faraday	Recommended for Military Cross, Dec. 20, 1916.
Entwhistle, Robt. G.	II	Almonte P. S.	
Evans, Joseph H.	II	Student, Hamilton N. S.	
Fathers, I. E. J.	III	S.S. No. 3, Dalton	
Ferguson, Robt. I.	III	S.S. No. 4, Chandos	
Fick, Ellis L.	I	Pauline Ave. School, Toronto	
Fiddis, Gordon H.	I	S.S. No. 7, Nottawasaga	
Firth, Alexander	II	Orangeville	
Fleming, Earl	I	Balaclava, St. Thomas	
Forsyth, Gordon O.	I	Dufferin, Toronto	
Foster, Thos.	II	S.S. No. 5, Huron	
Francis, Arthur	III	S.S. No. 7, Brock	
Frisby, Walter C.	I	Kent, Toronto	
Fuller, Robert M.	II	U.S.S. No. 4, Fullarton & Downie	
Fydell, M. R.	I	York Street, Toronto	
Galpin, Hubert B.	I	Talbot Street, London	
Garrett, Fred.	III	Student, London N. S.	
Geddes, John R.	II	S.S. No. 5, East Oxford	
Geddes, Norman	II	S.S. No. 8, Hullett	
Gibson, Edward Lyle	II	King George, Hamilton	
Given, Reginald F.	III	S.S. No. 9, Oso	
Glover, Winfred A.	II	S.S. No. 7, Madoc	
Gollan, Donald S.	III	S.S. No. 20, Osnabruck	
Gollan, Ian A.	III	No. 8, Wolford	
Goodwillie, Chas. A.	II	S.S. No. 11, Osgoode	
Goodyear, Hedley J.	I	Regal Road, Toronto	
Grant, Wm. Hardy	II	S.S. No. 1, Torbolton	
Grassie, Wm. E.	II	S.S. No. 8, Grimsby	
Gray, Joseph E.	I	McMurrich, Toronto	
Gray, William G.	II	Student, London N. S.	
Grierson, Nathan B.	III	S.S. No. 11, Bentinck	
Grieve, Wm. P.	I	Perth Avenue, Toronto	
Haig, Allister P.	I	Regal Road, Toronto	
Halladay, Guy B.	III	S.S. No. 1, Bastard	

Public School Teachers who have Enlisted for Overseas Service—Continued

Name	Cert.	School where last engaged	Overseas Record
Halliday, Clarence P.	I	Ottawa, Normal Model	
Hamilton, Wm. John	Insp.	Distr. Div. No. 2	
Hardy, Albert E.	II	Student, Peterborough N. S.	
Hare, James A.	II	Mossley	
Harkness, Andrew E.	I	S.S. No. 10, Essa	
Hayunga, Geo. H.	II	Student, Ottawa N. S.	
Harris, Max C.	III	S.S. No. 1, Ryerson	
Harvey, Norman	III	S.S. No. 11, Uxbridge	
Henderson, James G.	II	S.S. No. 3, W. & E. Flamboro	
Higham, Harry	III	S.S. No. 11, Sunnidale	
Hill, Jos. P.	I	Pauline Avenue, Toronto	
Holdsworth, John A.	II	King Edward, Brantford	
Holmes, Leslie T.	III	S.S. No. 13, Ameliasburgh	
Honey, S. Lewis	II	Bloomington	
Hoover, Robt.	II	S.S. No. 7, McKillop	
Houston, Wm. John	I	Palmerston Ave., Toronto	
Hunter, George A.	II	Brighton	
Hunter, W. L.	II	Shallow Lake School	
Irwin, W. R.	II	Student, Stratford N. S.	
Isaac, Benoni	II	S.S. No. 17, Haldimand	Shell shock, Sept., 1916.
Jennings, F. C.	I	Glenallan	
Johnstone, Lloyd	I	King Edward, Toronto	
Joyce, Walter, B.A.	II	Central, Brantford	
Kavaner, George F.	Dist.	S.S. No. 13, Storrington	
Kerruish, Hubert B.	I	Jesse Ketchum, Toronto	
Kerruish, Maxwell	II	Paris	
Kilty, Clarence G.	I	Frankland, Toronto	
Kinchsular, Redmond	II	S.S. No. 16, Walpole	
King, Alex. F.	I	Withrow Avenue, Toronto	
Kirk, Wm. F.	I	Jesse Ketchum, Toronto	
Knowles, Albert F.	II	S.S. No. 4, Dymond (Returned to teaching)	
Knowles, Morley Wm.	II	Port Rowan	
Knox, Frank A.	II	James Street, Orillia	
Latimer, Robt. H.	II	Student, Peterborough N. S.	
Laurie, Stuart M.	II	King George, Hamilton	
Lean, J. Erwin	II	Cold Springs	
Leslie, James A.	II	Student, Hamilton N. S.	
Leslie, Wm. B.	I	S.S. No. 5, Lash	
Lott, C. W.	II	Student, Stratford N. S.	
Lowden, Henry	III	U.S.S. No. 9, Portland	
Lowry, Robt. J.	I	Clinton Street, Toronto	
Lyall, Victor A.	II	Student, Hamilton N. S.	
Macaulay, Alex. M.	III	S.S. No. 13, North Orillia	
MacDermid, Lynden E.	III	Student, Cornwall M. S.	
MacDonald, T. A.	I	Dufferin School, Toronto	
MacEwan, James V.	III	S. S. No. 10, Charlottenburgh	
Macklin, Garnet E.	I	Dewson Street, Toronto	
MacMillan, Archie K.	III	S.S. No. 8, Finch	
Macpherson, Donald S.	I	Annette Street, Toronto	
McCallum, Archie P.	II	Student, London N. S.	
McCartney, T. Gerald	II	Student, Peterborough N. S.	
McClinton, James	I	McMurrich, Toronto	
McCorkell, Ignatius J.	II	S.S. No. 5, Mara	
McCullough, J. L.	I	Manning Avenue, Toronto	
McGill, Geo. W.	I	Withrow Avenue, Toronto	
McGirr, Ernest J.	III	S.S. No. 2, Egremont	
McIntosh, Herman W.	I	Strathcona, Toronto	Rejected — medically unfit.
McIntosh, Robt. W.	II	S.S. No. 11, Huron	

Public School Teachers who have Enlisted for Overseas Service—Continued

Name	Cert.	School where last engaged	Overseas Record
McKay, George	II	Student, London N. S.	
McLachlan, H. T.	II	Student, Stratford N. S.	
McLaren, James A.	II	Student, London N. S.	
McMaster, David A.	Dist.	S.S. No. 6, Brunel	Recommended for Military Medal; wounded Sept. 27, 1916. Invalided home.
McMillan, Dan. A.	III	Student, Ottawa N. S.	
McNaughton, H. R.	II	S.S. No. 7, Sombra	
McPhail, Alex. H.	I	Grace Street, Toronto	
Manning, Chas.	II	S.S. No. 4, Saltfleet	
Markle, John F.	II	Student, Hamilton N. S.	
Martin, Angus	II	Student, Stratford N. S.	
Martin, Joseph F.	II	Student, London N. S.	
Masson, H. Victor K.	II	S.S. No. 7, Seymour	
Meredith, Dalton H.	III	Student, Ottawa N. S.	
Merritt, Roland	II	S.S. No. 8, Saltfleet	
Might, Percy G.	I	Lansdowne, Toronto	
Milliken, Thos. W.	II	Matheson	
Minion, Harvey L.	II	S.S. No. 1, Laird	
Mitchell, Harold L.	II	S.S. No. 16, E. Zorra	
Moore, Geo. W.	II	Student, Hamilton N. S.	
Moore, Harry C.	I	Rose Ave., Toronto	
Morwick, Edward	II	S.S. No. 6, North Grimsby	
Moss, Eldrin W.	II	Paris	
Mossey, Clifford W.	II	S.S. No. 18, Yarmouth	
Mossop, Neron F.	II	S.S. No. 4, Harley	
Muir, Geo.	I	Sackville St., Toronto	
Muir, Peter M.	I	Pauline Ave., Toronto	
Munro, Jos. E. R.	II	South Central, Peterborough.	
Myers, Jacob Raymond	II	S.S. No. 1, Tisdale	
Myrick, Walter G.	II	Ottawa	
Nayler, Edwin T.	III	S.S. No. 7, Herschel	Wounded, October, 1916.
Nayler, John B.	III	S.S. No 8, Herschel & Faraday	
Neill, Millard L.	II	S.S. No. 1, MacIrvine	
Nicholson, R. W.	I	Dovercourt, Toronto	
Norton, Clarence L.	II	Student, London N. S.	
Orr, Henry L.	II	S.S. No. 7, Mornington	
Park, Maurice H.	I	King George, Peterborough	
Parkhill, Geo. E.	II	S.S. No. 4, Burford	Rejected—defective eyes.
Parkinson, Clair	II	R.R. No. 10, Oneida	
Patterson, John A.	III	Student, London N. S.	
Peacock, Wilfrid E.	II	S.S. No. 6, Adjala	
Percival, Samuel E.	II	S.S. No. 1, Oxford	
Pickering, Howard V.	H.S. Spec.	Normal School, Stratford	
Pilkey, Clifford G.	III	Student, Peterborough N. S.	
Pilkey, John H.	I	S.S. No. 9, York	
Pike, Abraham B.	I	Victoria Industrial, Toronto	
Posliff, Alfred L.	II	Wingham	
Power, Albert E.	III	Coe Hill	
Poyser, Beecher D.	II	Student, Ottawa N. S.	
Prouter, H. J.	I	Essex St., Toronto	
Quackenbush, Hubert A.	II	S.S. No. 3, Fitzroy	
Quackenbush, James G.	II	Morewood	
Ramage, Chas. C.	II	S.S. No. 3, Egremont	
Rattle, W. F.	I	McCaul, Toronto	
Rawson, Clark M.	II	S.S. No. 11, Verulam, Victoria E.	
Reid, Adam E.	II	S.S. No. 5, Greenock	
Reid, Russell	II	S.S. No. 2, Louth	
Richards, Harold C.	II	Student, Hamilton N. S.	
Richardson, Geo. P.	II	Huron St., Toronto	
Robinson, Robert H.	I	St. Helen's, Ont.	
Rorke, John A.	II	Port Carling	
Ross, Alex. M.	I	Norway, Toronto	
Ross, Kenneth	III	S.S. No. 12, E. Gwillimbury	

Public School Teachers who have Enlisted for Overseas Service—Continued

Name	Cert.	School where last engaged	Overseas Record
Ross, Percy J.	III	No. 2, Egremont	
Rowe, Geo. F.	II	Ottawa	
Russell, Angus	II	No. 2, Colchester S.	
Ryan, Arthur E.	II	Student, Hamilton N. S.	
Sabine, Alden T. S.	Dist.	S.S. No. 2, O'Connor	
Sagar, Edward J.	II	Cainsville	
Sarles, Roy M.	II	Bancroft	
Scott, Cyrus W.	I	Hillcrest, Toronto.	
Scott, F. M.	I	Queen Alexandra, Toronto.	
Scott, Geo. B. G.	III & M.T.	Winchester St., Toronto.	
Scott, Lloyd J.	III	S.S. No. 27 & 11 Elizabethtown & Yonge.	
Scott, W. Frank	I	Earl Grey, Toronto	
Scott, Walter	II	Cornwall Model School	
Seator, G. John	III	S.S. No. 1, Blake	
Shaver, Stanley M.	Dist.	U.S.S. 1, 18, 21, Williamsburg, Winchester Springs	
Short, Thos. A.	III	S.S. No. 5, Houghton	
Simmons, Wilfred L.	II	Student, Hamilton N. S.	
Smillie, Leonard A.	II	Comber	
Smillie, Wm. R.	II	S.S. No. 8, Burford	
Smith, Arnold	II	S.S. No. 1, Whitney	
Smith, Eugene	Dist.	S.S. No. 3, Olden	
Smith, James M.	III	S.S. No. 13, Bentinck.	
Smith, John A.	II	Student, London N. S.	
Spence, Clarence C.	II	Student, London N. S.	Discharged—illness.
Spence, Frank A.	I	Kent School, Toronto	
Spenceley, Harold	Dist.	S.S. No. 2, Guilford	
Springett, Walter	II	Student, London N. S.	
Stephenson, Walter H.	II	S.S. No. 10, Ekfrid	
Stewart, Alex. E.	II	S.S. No. 6, Saugeen	
Stewart, Richard A. W.	II	Central, Barrie	
Stothers, John C.	I	Ryerson, Toronto	
Strader, Edward	II	S.S. No. 13, Matilda	
Stratton, Hubert V.	II	S.S. No. 18, Sombra	
Tamblyn, Wm. J. W.	I	Howard, Toronto	
Thompson, Clinton C. E.	II	Scott St., St. Thomas	
Tiffin, Jos. A.	II	S.S. No. 3, Scott	
Toogood, Wilfred A.	II	Tillsonburg	
Trout, H. Bernard	II	S.S. No. 1, St. Joseph	
Vallentine, Harold J.	I	Orde St., Toronto	
Vickery, C. A.	I	Dufferin, Toronto	
Wagar, Ernest T.	III	S.S. No. 14, N. Fredericksburg	
Wagner, Russell	II	U.S.S. No. 1, Saugeen, Arran & Elderslie	
Walden, Wilbert	II	S.S. No. 1, Huron	
Warnica, Roy W.	II	S.S. No. 2, Howland	
Warren, Harold A.	II	S.S. No. 25, Waterloo	
Watson, Stanley A.	II	West Ward, Orillia	
Watt, Jas. H.	I	John Fisher, Toronto	Rejected—medically unfit.
Welland, Fred. J.	II	Dickson School, Galt	
Welland, Jos. F.	II	St. Andrew's, Galt	
West, Randolph H. A.	I	Shirley St., Toronto	
Wheable, Geoffrey A.	I	Chesley Ave., London	
Wheatley, Jas. A.	Dist.	Utterson	
Wheeler, H. A.	I	S.S. No. 1, Tisdale	
Wholton, Thos. H.	II	King George, Hamilton	
Weir, Arthur G.	II	Student, Hamilton N. S.	
Wilson, John S.	II	S.S. No. 3, Bentinck	Wounded at St. Julien.
Wright, Richard J.	II	S.S. No. 22, Malahide	
Young, J. Perry	II	S.S. No. 10, Windham	Wounded before Regina trench, Somme.
Young, W. Frank	II	S.S. No. 19, Townsend	

Normal School Students

The following students enlisted before the completion of their Normal School Course:—

Name	Normal School	Name	Normal School
Avery, Geo. M.	Stratford.	MacMillan, Dan. A.	Ottawa.
Bailey, Garnet R.	Peterborough.	Martyn, Eugene F.	Stratford.
Buchlass, Ralph J.	Stratford.	Morley, Gordon J.	Stratford.
Bullick, George	North Bay.	Nimmo, Lester G.	Stratford.
Burnash, Herbert A.	Peterborough.	Penrice, Alvin R.	Stratford.
Carley, Forest C.	Peterborough.	Ravitch, Henry	Stratford.
Carson, Robert J.	Toronto.	Robinson, Gabriel A.	Peterborough.
Clinton, James H.	Stratford.	Robison, Nelson R.	Stratford.
Cracknell, Arthur G.	Peterborough.	Ross, Walter V.	Stratford.
Dunsmore, Joseph M.	Stratford.	Shewfelt, Archibald G.	Stratford.
Findlay, R. Murray	Stratford.	Tait, Frank B.	Hamilton.
Garbutt, Harold A.	Peterborough.	Taylor, Roy	Hamilton.
Hart, Enos	North Bay.	Walton, Geo. R.	Stratford.
Honey, Edgar M.	Peterborough.		

Non-Certificated Teachers

The following teachers at the time of their enlistment were engaged in teaching under special conditions either as

(1) Special teachers in Technical or Normal Schools;
(2) Instructors in Drill or Physical Culture in High Schools or
(3) Temporary teachers in Public or Separate Schools.

Name	Qualifications	School where last engaged	Overseas Record
Adams, A. H. S.	Scotch	Technical School, Toronto	
Aikenbrack, Ibri B.	Temp.	S.S. No. 13, Miller	
Armstrong, Ed. W.	Temp.	S.S. No. 4, Dobie	
Beeson, James	Ph. Cult.	St. Thomas C. I.	
Brimble, Gerard	Temp.	S.S. No. 1, Jaffray	
Chester, John W.	A.R.C.A. Eng.	Central Technical, Toronto	
Collins, Warren A.	Temp.	S.S. No. 2, St. Edmunds	
Graham, Christopher J.	Temp.	S.S. No. 6, Lindsay	
Gregory, Wm.	Drill Inst.	London C. I.	
Huggins, S. J.	Ph. Cult.	Ottawa C. I.	Wounded at St. Julien. Invalided home. Returned.
McCann, Clarke W.	Temp.	S.S. No. 2, Papineau	
McIntosh, James P.	Drill Inst.	Hamilton P. S.	
Oxtaby, Wm. G.	Cadet Inst.	Brantford C. I.	
Read, Arthur	Temp.	S.S. No. 2, Worthington	
Robertson, Margaret	H. Sc.	Central Technical, Toronto	
Scott, Mason F.	Temp.	S.S. No. 6, Dilke	
Skinner, Jesse	Drill Inst.	Hamilton N. S.	
Stares, Henry A.	Mus. Bach.	Hamilton N. S.	
Toll, Charles E.	Temp.	S.S. No. 3, E. & W. Flamboro	
Williams, John	Cadet Inst.	St. Catharines C. I.	
Witthun, William	Drill Inst.	Hamilton P. S.	

APPENDIX A

REPORT OF THE CHIEF INSPECTOR OF PUBLIC AND SEPARATE SCHOOLS

To the Honourable R. A. Pyne, M.D., LL.D.,
Minister of Education for Ontario.

I have the honour to submit herewith my report upon the condition of the elementary schools throughout the Province. The information is derived from the Annual Reports of the Public and Separate School Inspectors in the various counties and districts.

Agricultural Education

During the year considerable progress has been made in Agricultural Education. Usually wherever classes in Agriculture have been introduced, they have proved successful, and have in many cases aroused a great deal of local interest in scientific Agriculture and in the beautification of grounds. In almost all cases where Agriculture has been introduced, School Fairs have been held. The attitude of the public towards Agricultural Education and School Fairs, is indicated by the following quotations:—

Inspector J. F. McGuire.—It is a pleasure to report an increased interest on the part of trustees and teachers in the teaching of Agriculture.

Inspector R. A. Paterson.—Each School Fair was well attended and was the centre of great interest on the part of both young and old.

Inspector W. J. Hallett.—The teaching of Agriculture in the rural schools is meeting with great favour.

Inspector A. Odell.—Five Fairs were held. They are very popular and are doing good work.

Inspector J. W. Forrester.—Agriculture has made substantial progress during the year.

Inspector A. A. Jordan.—In 1915 three schools taught the subject for the full year. In 1916, eighteen schools entered for the work.

Physical Culture

Very considerable progress has been made in this subject. In nearly all the Inspectorates, due attention is now being given to it.

Inspector Gill.—Physical Culture work in the schools has improved since its inception.

Inspector Hallett.—Physical Culture is very popular. The pupils take great delight in the exercises.

Inspector L. Norman.—All take part in the course but the pressure of other work prevents it being taken up fully.

Inspector Payment.—Physical Culture is being appreciated at its value in my schools.

Inspector H. D. Johnson.—Physical Culture received proper attention in all the schools. This subject is well taught.

Inspector Odell.—Nearly all the schools in the Inspectorate are taking up the prescribed course in the Strathcona Syllabus.

Inspector McDowell.—In all the schools in the Inspectorate there is some form of Physical Culture attempted.

The above quotations will indicate that this subject is now receiving a good deal of attention in all classes of schools in the Province. The withdrawal, however, of a great number of teachers for service in the war, has decreased the number of available teachers holding Physical Culture certificates.

Truancy

The Reports of Inspectors show generally, that truancy is decreasing:—

Inspector Tytler.—I have the pleasure of stating that in Guelph, truancy in the proper sense of the term, is a thing almost unknown.

Inspector T. A. Craig.—The present scheme of reporting truants, within the compulsory age, is having good effect.

Inspector Cole.—Truant officers have been appointed in all townships but one.

Inspector Taylor.—A decided improvement is noted within the year.

Notwithstanding the increased demands for the help of the children at home and on the farms, the conditions with respect to absences from school are greatly improving.

It is evident, however, that before the conditions with regard to truancy can be regarded as satisfactory, it will be necessary for each municipality to secure the services of efficient truant officers and to make a serious effort to secure the enforcement of the law. It will soon be necessary for the Province to make fuller provision for the attendance at school of adolescents between the ages of fourteen and sixteen years.

Art and Music

These two subjects are receiving an increased amount of attention and a large number of teachers are being annually added to the list of those specially qualified to teach these subjects.

Other Subjects

In regard to the other subjects of the course, there is a manifest tendency to bring each subject into some direct and vital contact with the everyday life of the child, and the teachers are coming more directly to realize that their primary duty is to fit the child for future citizenship.

Inspection

Very considerable improvements have been made within the past five years in the methods of school inspection:—

1st. The reports upon the condition of the schools are much more complete and now furnish valuable data for needed modifications in the school courses and in educational methods.

2nd. A greater amount of time is given to the work of inspection, and a more serious conception of the value of adequate inspection is being entertained by the community at large, as a means of improving the efficiency of the schools.

3rd. The work done by the Inspectors no longer consists merely in observing the work in the school room and reporting their impressions of the efficiency of the teacher and the progress of the pupils. Much more time is given by the Inspectors to teaching model lessons, and to inspiring in teachers and pupils a proper attitude towards Education in general.

4th. The Inspector has also increased his activities in the way of giving necessary information and advice to Boards of Trustees in regard to the enlargement of school grounds, the modification of school buildings, and the erection of new schools.

5th. In the majority of cases a very much closer contact has been set up by various agencies between the Inspector, local boards, and the parents. The home and the school are daily coming into closer contact.

Consolidation

The question of the consolidation of rural schools is coming to the front. During the year I have attended several meetings at the request of ratepayers interested in the subject. In general, the best opinion has been strongly in favour of the movement, notwithstanding the fact that it might entail larger expenditures than are required for the maintenance of rural schools, as at present constituted. There appears to be, at last, a very serious awakening to the obvious fact that the only question before the State is, what form of education is the most efficient, and no longer, what form of education is the least expensive. If the Legislature were prepared to support the movement by grants to be given: (*a*) for the conveyance of pupils, (*b*) for the erection of buildings, (*c*) for the number of schools consolidated, or for all three, upon some arranged schedule, I have no doubt that this movement, which seems to promise a great deal for educational efficiency, would be crowned with success. I shall be glad from my knowledge of the actual conditions to present a workable scheme for your consideration.

Public School Manuals

Within the school year the work of completing the list of Public School Manuals has been accomplished. A regulation has come into effect requiring that the full set be placed in every school in the Province. Formerly it was found that even the Normal trained teacher very soon got out of touch with the principles and methods of teaching acquired at the Normal School and that his increased experience did little more than supply the wastage thus incurred. The improvement brought about by the issue of these Manuals is very well set forth in a passage from the report of Inspector Elliott, which reads as follows:

"I am pleased to note the general improvement in the teaching of the major subjects. This, I believe, is largely due to careful study of the Manuals issued by the Department of Education. Young teachers are here presented with a logical sequence of topics in the various subjects, together with proper methods of presentation. As a result of their general use, I find a growing self-confidence in teachers, which materially strengthens the work of the school. The Department of Education is to be congratulated on the issue of these Manuals, which in a very practical way brings to the teacher the best work of the Normal School."

Model Schools

Three Model Schools, namely, the Guelph Model School, the Clinton Model School and the Chatham Model School, went out of operation last year, as the territory for which they furnished a supply of teachers had been fully covered by normal school graduates. A new Model School was opened at Port Arthur and successfully operated during the autumn of 1916 for the purpose of supplying training for teachers in the more remote districts of the Province. The growth of the Summer Model Schools at Sharbot Lake, Madoc, Bracebridge, Gore Bay,

Ottawa, Port Arthur and Sturgeon Falls will very soon render the issue of Temporary certificates unnecessary, and it will be possible for every school, even in the remotest districts, to secure a teacher who has had at least some professional training.

Superannuation

The teachers' superannuation scheme proposed by the present Legislature must be productive of the most beneficent results:—

1st. The bill when it passes into law will allow a great many teachers to retire upon a living allowance who have been for some time anxiously awaiting the opportunity.

2nd. The bill will also secure a much to be desired permanency in the profession. When the teacher realizes that superannuation awaits him and that he has a vested interest in his profession, he will not be so apt to take up other lines of work.

In the measure proposed the Legislature has earned for itself the gratitude of the retiring teachers and also the commendation of everyone who is acquainted with the present educational needs of the Province.

I have the honour to be, Sir,

Your obedient servant,

JNO. WAUGH,
Chief Inspector.

Toronto, March 14th, 1917.

APPENDIX B

REPORTS OF THE INSPECTORS OF CONTINUATION SCHOOLS

I. REPORT OF INSPECTOR MILLS

To the Honourable R. A. Pyne, M.D., LL.D.,
Minister of Education for Ontario.

Sir,—I have the honour to submit the following report on the Continuation Schools of my inspectorate.

I have the honour to be, Sir,

Your obedient servant,

G. K. Mills.

Toronto, December 30th, 1916.

The schools in the eastern and northern part of the Province that have been under my supervision may be classified as follows:

Grade A Schools,—having the full time of three teachers	1
Grade B Schools,—having the full time of two teachers	43
Grade C Schools,—(*a*), having the full time of one teacher and at least half the time of a second teacher	8
(b), having the full time of one teacher	17

There are, therefore, sixty-nine schools in all, having one hundred and twenty-two teachers, eight of whom give only half time to Continuation School work.

The Staffs of the Schools

There are twenty men and forty-nine women principals, and four men and forty-nine women assistants. Eighteen of the principals and the same number of assistants are graduates of a University. During the past year there have been fifty-nine changes in the staffs of these schools. This constant changing of teachers has seriously affected the efficiency of many of the schools, but as there is now a plentiful supply of teachers, the inducement to make a change will be less.

New Schools and Buildings

During the year new schools have been established at Navan and South Porcupine, and the school at Kinburn, which had been discontinued for lack of suitable accommodation, was reopened in a very creditable building, modern in every particular. The school at Manotick has been discontinued until suitable accommodation can be provided. A fine new six-room school is being erected at Finch and another room has been added to the Continuation School building at Kenmore.

Some Common Difficulties

1. ACCOMMODATION AND EQUIPMENT

The conditions under which the work of Continuation Schools is carried on give rise to difficulties that, while by no means confined to these particular schools, are probably more frequent and more prominent.

One difficulty is that of procuring suitable accommodation and sufficient equipment for the proper carrying on of the work of the school. The teachers are usually young, have had very limited experience and are timid about pressing for the needs of the school. The trustees have been accustomed only to Public Schools where the work is carried on without special accommodation and with little or no expenditure for equipment. A serious wag of the head and a grumbling remark about the inability of the section to stand the expense is sufficient to stand off the timid, inexperienced teacher. He does not know or has not nerve enough to point out that the Board receives an annual grant of sixteen per cent. of the value of all equipment, and thus it not only costs the section nothing but soon becomes a source of income to the school. He rather learns to get along somehow without necessary equipment and forms very bad habits of teaching.

2. NEGLECT OF EQUIPMENT

Many teachers do not properly care for nor make sufficient use of the equipment provided. Maps are allowed to stand in the corner accumulating dust, and history and geography are taught without their assistance. The school library is seldom used to the extent that is intended. The dictionary and more particularly the encyclopœdia and gazetteer are rarely used, and pupils pass through the school unaware of the value of such works of reference. Too frequently notes dictated by the teacher take the place of practical work in botany and zoology and the laboratory tables and equipment show few signs of use. Such methods are the refuge of the weak or indolent teacher.

3. EXAMINATION SUBJECTS

The pressure of the work in these schools is responsible for a tendency on the part of a number of teachers to give scant attention to work that does not bear directly on examination. While there has been a decided improvement in this respect during the past year in such subjects as physical culture, supplementary reading and oral composition, it is with evident reluctance in many cases that adequate provision is made for such work.

In a number of schools the subjects not required for Lower School examination, as algebra, geometry, composition and literature, are dropped too soon after Easter in order that examination subjects may be stressed. As a result many of the pupils promoted to the Middle School are poorly prepared, particularly in the mathematical subjects, to keep up with the other members of the Middle School class. This condition has been accentuated during the past year by the introduction of the new text book in Algebra, and by a number of students who obtained promotion to the Middle School on Farm Labour certificates. Such a condition may be met very satisfactorily in schools where the staff is sufficiently large to provide for a junior and senior division of the Middle School, but in schools with two teachers where all the work must be covered efficiently in one year a serious difficulty arises when pupils enter the Middle School with insufficient preparation.

4. WRITING AND NEATNESS OF WORK

The last difficulty I shall refer to is that relating to the lack of good writing and neatness of work. These defects are by no means confined to Continuation Schools, but, since a very large proportion of the pupils in attendance at these schools come from rural schools, it may be expected that the standard of the work in this respect will be somewhat below that of the larger High Schools. The numerous classes of the rural school, the irregular attendance and manual labour of the pupils, and the frequent changing of teachers, all tend to reduce the standard of this work in these ungraded schools. That a very great improvement may be made in the writing and neatness of work of those pupils who come to Continuation Schools has been shown in many schools where the staff has worked together with this end in view. With a due amount of care to this very important part of school training it should be possible to extract the element of truth from the statement sometimes made by business men that,—"Your High School pupils cannot write decently and they are messy and sloppy in their work."

Such Conditions not General

It must not be supposed that the above conditions are general in these schools. When the conditions under which the work of these schools is carried on are properly appreciated the general standard of work is remarkably good. The great majority of the teachers are young, have a limited knowledge of the subjects and have had little experience. Each teacher is responsible for a greater number of subjects than is the case in larger schools. The pressure of the work is increased because of the more intimate relation these schools have with the people of the small communities in which they are located. However, when due allowance is made for all these factors it is evident that much of the poor work, as also the good, is due to similar methods in the schools that these young teachers have attended.

Recent Improvements

But in case I should be misunderstood and the opinion formed, from the difficulties and defects I have so unsparingly pointed out, that the work of these schools is of a very inferior kind, I must, in justice to the majority of the teachers and school boards, say that a marked improvement has been shown in all departments of the work during the past few years. These schools have passed the experimental stage and are now firmly established as an important part of the educational system of the Province. They have proven their value to the small communities in which they have been established, and with few exceptions the people are willing to contribute freely to their support. The accommodations have been greatly improved. During the past five years twenty-two new school buildings have been erected in my division of the Province and four of these have become High Schools. Additions of one or more rooms have been made to five other schools and many old school buildings have been renovated and improved. Thirty-four schools have, during the year, been provided with suitable laboratory accommodation so that pupils may carry on the work in Science experimentally, and with very few exceptions the accommodation for practical work in Science is now suitable and adequate for the present attendance. Nearly all school boards have made additions to the equipment and this is rapidly nearing the required minimum in all schools and is much above it in some. There is now not only a sufficient supply of qualified teachers but school boards that advertise at a suitable time have many applications from which to choose. The work that may be attempted in these

schools has been limited by regulation and the organization has thereby been greatly improved. The Summer Courses provided to give a suitable training for teachers of such special subjects as Art and Physical Culture have resulted in a great improvement in the work done in these departments, and, while these schools are not yet giving all the services to the communities that they may be made capable of giving, very rapid progress towards efficiency has been made.

The Future of These Schools

The accommodation, equipment, organization, academic and professional qualifications of the teachers, and the provision for maintenance and control of these schools, leave relatively little to be desired under traditional ideas of secondary education. With a little adjustment here and there, and subject to the human imperfections of teachers, inspectors and school boards, the system seems to have reached a condition of comparative perfection just at the moment when our whole system of public education must be greatly modified and extended. It is, perhaps, well that this side of our educational system is so well organized that it will need little attention for many years, while the industrial side will be requiring the best thought of statesmen and educational leaders. The end of the war will mark the end of a period in the world's history. The new era will be one of industry and commerce, not conducted in any haphazard way, but based on scientific principles and calling to its aid every achievement of art and science. The country that will make the most progress is the country that learns best how to use the abilities of her citizens and how to conserve human energy. At present the great majority of our youth are ill equipped for the work of life. More than eight out of ten receive no education after fourteen years of age, and many leave school at an earlier age. Vast numbers of our boys go into occupations that give no training worth while and lead no place, and when they reach manhood find themselves day labourers without opportunity to prepare for anything better. The waste of human ability is infinitely the greatest waste in any country.

The statesman who would mould a nation must begin with the child. Legislation dealing with middle life or old age is patchwork, good enough in its place and necessary under conditions, but the fundamental conditions of a nation's prosperity and progress lie in the education and training of its youth. The development of these Continuation Schools and of our whole system of public education has reached a point where it must become a conscious development toward an end that is deemed essential for the welfare of the individual and the state.

The function of our secondary schools is no longer to prepare teachers, or to give an introduction to the learned professions, or even to give a so-called cultural education. They may well provide for such for those so inclined, but their chief function must be to provide an opportunity for every boy and girl to better fit himself for the pursuit of such worthy occupation as he may choose to follow in life. The standard of admission to any but the professional courses should no longer be an Entrance examination, but that of age and desire, and the desire should be quickened by the command of the state.

It is at present impossible to consider special courses adapted to the needs of all trades. Such schools can be established only in the largest centres. The Department by its regulations and by a very liberal system of grants has made it possible, but, in my opinion, it should, within a very few years, be made obligatory for every two-teacher Continuation School and every High School having four teachers or less, to establish departments of Agriculture and Household Economy

that will give a two years' course and winter courses in each department. Schools having a staff of more than six teachers should find it obligatory to establish departments in Technical Training and Household Economy, each giving a two or three years' course, while schools having a staff of between four and seven teachers should be given the right to select, but must select either of the above. In order to remove some of the difficulties in the way of such an obligatory scheme for industrial training, provision should be made for educating and training a sufficient number of the best available teachers; a plan should be formulated whereby the burden of providing the necessary school accommodation will be distributed over the municipalities that derive benefit from such a school, and attendance at such classes, or at the present school courses, for the greater part of the time between the ages of fourteen and seventeen should be compulsory.

Successful work in such courses should be given credit on University Matriculation examination, and a student should be able to enter many courses at the Universities without having to face such subjects as Latin, French or German, or even Algebra and Geometry. I know this, to some, is heresy, but the time is near when it will be regarded as an accomplishment of greater mental and moral value to the individual as well as profit to the state to be able, with intelligent interest, to make a loaf of bread, to shoe a horse, or to feed pigs, than with suppressed objurgations or patient resignation to stumble over subjunctive moods in Latin, or to face deductions in geometry in silent wonder as to what it all means.

II. REPORT OF INSPECTOR HOAG

To the Honourable R. A. Pyne, M.D., LL.D.,

Minister of Education for Ontario.

Sir,—I beg to submit for your consideration the following report on the Continuation Schools under my supervision for the year 1916.

I have the honour to be, Sir,

Your obedient servant,

J. P. Hoag.

Toronto, December 30, 1916.

The Province of Ontario is divided into two districts for the purposes of inspection of Continuation Schools. During the year 1916 I have been in charge of the western district, which consists of the counties of Peel and Simcoe, and all that portion of the Province lying west of these counties as far as the River Detroit and Lake Huron. In this district, during 1916, two new schools, Delhi in Norfolk County and Delaware in Middlesex County, have been opened and one school, Elmvale in Simcoe County, has been discontinued. The number and class of schools in the district in 1916, and the number of teachers employed is shown in the table herewith:

Grade of School.	No. of Schools.	Teachers.
A—3 teachers	3	9
B—2 teachers	53	106
C (1)—1 teacher and half time of a second teacher	4	8
(2)—1 teacher	6	6
Total	66	129

In accordance with the Regulations, I visited each of these schools at least once during the school year. In several cases where proposed building operations or improvements, or where the interests of the schools seemed to make such visits advisable, I visited schools two or three times. One school, Thorndale, I visited four times.

Accommodations

Notwithstanding the war, school boards have been ready to do all in their power to improve building and other accommodations, and appear to have experienced little difficulty in securing the necessary money.

Two school buildings, those at Elmvale and at Beeton, were destroyed by fire. Plans are being prepared for new and modern buildings to replace those destroyed. At Creemore a by-law has been passed providing for the issuing of debentures for the erection of a new building to house both Public and Continuation Schools. The Continuation School building at Harrow has been completed and is now in occupation by the school. Additions to the buildings at West Lorne and Tavistock will be completed early in 1917. A science laboratory has been fitted up in the Brussels school and many minor improvements have been made in other schools.

Equipment

The Regulations of the Department require that the minimum value of the equipment for Continuation Schools shall be as shown in the table attached:

	Grade B Schools.	Grade C Schools.
Library	$300	$150
Scientific Apparatus	300	150
Biological Specimens	50	25
Maps, Charts, etc.	50	25
Art Models, Supplies, etc.	50	50

While a large number of the schools will be found to have provided equipment beyond the minimum required, there are some schools which are still under the minimum. Where the deficiency is in the value of scientific apparatus I have found difficulty in securing a great advance, as, owing to the war, prices of all scientific apparatus have advanced enormously and it is almost impossible to secure prompt delivery at any price. Very considerable additions to the equipment in the other departments of the schedule have however been made. I feel sure that within a very short time all our Continuation Schools will have reached the minimum standard required for equipment.

Qualifications of Teachers

In my report for the year 1915 I stated that the supply of properly qualified teachers appeared to be adequate. This statement referred, of course, to the

ordinary certificates, possession of which qualify teachers for positions on the staffs of Continuation Schools. The statement did not refer to the holders of special certificates in Art, Physical Training, etc. The regulations issued in 1916 require school boards to have upon their staffs at least one teacher who is the holder of an Elementary Art certificate and, subject to the recommendation of the Inspector concerned, at least one teacher who is the holder of an Elementary certificate in Physical Culture. As such certificates cannot be obtained during the year of attendance at the Faculty of Education, it follows that it is necessary for teachers to attend a summer school in order to qualify themselves for positions on the Continuation and High School staffs when the special certificates are required.

I regret to report that in many cases school boards found it impossible to secure teachers who were holders of the special certificates required as a sufficient number of teachers did not attend the summer schools in 1916. Many teachers and boards claimed to be unaware of the regulation requiring the special certificates in Art and Physical Training, but in every case agreed to comply with the regulations after the summer of 1917.

On account of the scarcity of teachers qualified in Art and Physical Training, and in view of the promise in each case to take the summer course in 1917, I have recommended that Temporary Certificates in Art and Physical Training be granted to a number of teachers. But I feel sure that the need for granting temporary certificates in these subjects will not be apparent after September 1917.

In view of the difficulty that has been found, however, I would respectfully suggest that attendance at a summer school in Art or Physical Training be required of every graduate of the Faculty of Education who desires to teach in a Continuation School.

Again, during 1916 as during 1915, I have found holders of Public School (Interim) or High School Assistant (Interim) Certificates applying for and securing positions as Principals of Continuation Schools. In every case when this has occurred I have felt it my duty to insist that the board concerned secure a properly qualified teacher. It is true that the changes of teachers involved sometimes causes loss to both pupils and teachers and inconvenience to the board, but I have found that only drastic action will prevent repetition of this violation of the regulations. If school boards would refuse to appoint to a position any teacher who does not fully describe the certificates held by him or her, or if the boards would submit names of applicants to the Inspector concerned before making an appointment, much difficulty would be avoided.

For the teacher who secures a position in the manner described above I have no sympathy and little respect. In nearly every case the teacher has been wilfully ignorant of the regulations he was expected to know or he has deliberately sought to evade them. But as it is so difficult to show deliberate intention to violate regulations, it is impossible to recommend the cancellation of certificates; there therefore remains no course but to insist on the board securing another teacher.

Conditions of the Schools

I am pleased to be able to report that in the scholastic work of the schools advancement is being made. I feel that very considerable advance has been made in all school subjects both in methods of teaching and in results shown by the pupils. This is particularly true of Oral Reading and Geometry, to which I have referred in previous reports. Wherever teachers have insisted that all work read or spoken by pupils be uttered in a clear distinct tone, I have found good oral read-

ing; wherever teachers have insisted that pupils draw carefully all figures and employ the eye to aid the mind, I have found satisfactory work in Geometry.

In the practical work in Science, however, while there has been improvement during the year much remains to be done. In some cases I have found teachers performing experiments and pupils acting as interested spectators instead of the pupils performing the experiments themselves. I am glad to say that such teaching of science is rapidly disappearing. If it is true that "things seen are mightier than things heard," it is equally true that in practical work "we learn to do by doing."

The War

During the year the great war has been uppermost in the mind and heart of everyone. In our schools, teachers and pupils have followed the mighty struggle from day to day by means of maps, newspapers, and other publications. This has been done not so much as a preparation for the inevitable examination in History as from a sincere interest in the progress of our Empire's fight for the preservation of liberty. Then, also, every school has one or more names on its Honour Roll of those who have gone to do "their bit." The Principal of the Princeton Continuation School, Mr. Lloyd Hughes, and the Principal of the Grand Valley Continuation School, Mr. E. H. Glenn, have gone overseas to take their places with boys from their own and other schools.

APPENDIX C

REPORTS OF THE INSPECTORS OF HIGH SCHOOLS

I.—REPORT OF INSPECTOR WETHERELL

To the Honourable R. A. Pyne, M.D., LL.D.,
Minister of Education for Ontario.

Sir,—I have the honour to submit herewith my Annual Report on the Collegiate Institutes and High Schools in my inspectorate of the last school year.

During the academic year 1915-1916 it was my privilege to visit the Collegiate Institutes at Brockville, Cobourg, Kingston, Lindsay, Morrisburg, Napanee, Ottawa, Perth, Peterborough, Picton, Renfrew, Smith's Falls, Vankleek Hill, and the High Schools at Alexandria, Almonte, Arnprior, Athens, Avonmore, Belleville, Bowmanville, Brighton, Campbellford, Carleton Place, Chesterville, Colborne, Cornwall, Deseronto, Gananoque, Hawkesbury, Iroquois, Kemptville, Madoc, Markham, Morewood, Newburgh, Newcastle, Norwood, Omemee, Oshawa, Pembroke, Plantagenet, Port Hope, Port Perry, Prescott, Richmond Hill, Rockland, Stirling, Sydenham, Trenton, Uxbridge, Weston, Whitby, Williamstown, Winchester—54 Schools.

During the year I also visited the following Private Schools in connection with the requirements of Regulation 37 as to Science, Art, Bookkeeping and Writing: Convent of Mary Immaculate, Pembroke; Convent of Notre Dame, Kingston; St. Joseph's Academy, Lindsay; St. Joseph's Convent, Toronto; Albert College, Belleville; Ontario Ladies' College, Whitby; Havergal Ladies' College, Toronto.

Improved Accommodations

During the year some important improvements have been effected in School Buildings. The new wing of the Perth Collegiate Institute, including a gymnasium and excellent laboratories, has been completed. In Ottawa the work of re-construction necessitated by the disastrous fire of September, 1915, has been completed. At the time of my visit to Ottawa last winter the Commercial Classes were housed in seven rooms of one of the Public Schools, but these classes since last September have had more comfortable and more central quarters in a new Commercial Building. The Whitby Collegiate Institute Building has been re-constructed at a cost of $12,000. The Whitby Board has given a written guarantee that a new building for the Collegiate Classes will be erected on another site within a few years. The new wing of the Kingston Collegiate Institute has been completed and occupied. The new High School Building at Brighton has been erected and occupied since my visit to the Brighton High School in September, 1915.

A large number of the Schools are facing the problem of constructing new buildings or of re-constructing old. In Renfrew the very remarkable growth of the Collegiate Institute attendance has made the question of a new building imperative and pressing. In Belleville the Board, it is hoped, will soon implement a promise of long standing and provide High School accommodations worthy of the city. New buildings are also urgently needed in Almonte, Campbellford, and Carleton Place. Brockville, which liberally provided additional accommodations a few years ago, is again embarrassed by overflowing classes. The buildings at Madoc, Uxbridge, and Markham should be enlarged at the earliest possible date.

Physical Culture

Perhaps in none of the other activities of the schools has such a transformation been effected in recent years as in Physical Culture. Ten years ago not one High School in ten had any regular organization for bodily exercises, and even in the Collegiate Institutes the exercises were often of a merely nominal and perfunctory kind. About seven years ago the course in Physical Culture was made virtually obligatory in all High Schools, and about five years ago the teachers of Physical Culture began to receive special training in summer classes. Now a large proportion of the teachers of Drill and Calisthenics hold elementary certificates, and many hold specialist certificates. In many schools a very high degree of efficiency has now been attained, and in nearly all schools the standard of efficiency has been greatly elevated.

While the general situation, then, in Physical Culture is highly satisfactory, it may seem ungracious to find fault with a few details. I would, however, seize this opportunity of passing some strictures on the procedure obtaining in a few schools.

(1) In Collegiate Institutes, which are required to take up the course an hour and a half every week in each form of the Lower School and an hour every week in each form of the Middle and Upper Schools, there is a tendency to shorten the period of exercise to 15 or 20 minutes, although the allotted time as designated by the time-table is 30 minutes. The instructors declare, with some show of reason, that vigorous exercise for 15 or 20 minutes is all that the average pupil can stand. If this is so, and I am inclined to think that the contention is sound, the Regulation should be changed so as to call for 15 or 20 minutes every school day. After all, the only ideal system of Physical Culture is that which insists on daily exercise.

(2) Another tendency too prevalent in Collegiate Institutes is the growing practice of allowing many Upper School pupils to omit the Physical Exercises altogether. The argument advanced is usually the plea that older pupils have been so well trained in the earlier years of their school career that they should be allowed to do as they please when they reach the Upper School. The teachers who plead thus fail to measure the purpose and worth of Physical Culture. The chief thing desired is not training but constant exercise, and collective training is only a convenient medium for attaining the end in view. Moreover, the pupils who do the severest mental work, and who, accordingly, need physical exercises more than any others, are the very pupils who suffer injury from the mistaken kindness here condemned.

(3) Another tendency which must be guarded against is the disposition to exempt too large a number of pupils under Regulation 16, (2), (*c*): "No pupil shall be exempted." etc. In a few schools last year I found that from three to eight per cent. of the pupils had been exempted on the recommendation of local physicians and that the Principals had weakly acquiesced. In one or two schools it was apparent even to a visitor that many of the exempted pupils would have been in better health if they had been required to join their fellow-pupils in drill and calisthenics. Too often, no doubt, the exemptions had their origin in the pupils' disinclination rather than their physical disability. One perplexed Principal exclaimed: "Well, how can I go counter to the direction of a medical certificate?" As soon as a Principal is aware that an unwise local practitioner is wresting the control of the school from his hands and advising a deleterious course, he should courageously take measures to check the reprehensible practice. As a

rule, not more than two or three pupils in every hundred are incapacitated for physical exercises of the milder varieties.

Art

The work in Art steadily, even rapidly, improves. The beneficial influences of the College of Art are radiating into every corner of the Province. The great increase in the number of Art Specialists in the last two or three years has proved a leaven of blessing in the secondary schools. In no fewer than nineteen of the schools of my District I was pleased last year to grade the character of the teaching in Art as "I".

The number of pupils taking Middle School Art has increased very rapidly under the fostering stimulus of the "bonus" inducement. It is a question whether the Special Grants (Regulations, Page 47), instituted ten or twelve years ago for the purpose of encouraging advanced work in Art, should now be continued. The advanced course would now seem to be able to stand alone without the support of a financial honorarium. There does not now appear to be any sufficient reason why the teacher of Art should be more highly favoured than the heads of the other departments.

Spelling

In a recent copy of a Toronto daily appears an exceptionally interesting article on the theory and practice of teaching spelling. As the views contained therein agree, in the main, with the convictions which I have reached after many years of experiment, I reproduce here a portion of the article, in the hope that I may help to correct some defective methods of teaching spelling which are too common in the schools:

"There is, or at least there ought to be, no difference of opinion among people of common sense regarding the place assigned and the importance attached to the spelling of English words in the use of the English language. To prove the soundness of this assumption one need cite only the fact that inability to spell words correctly in writing is a formidable if not a fatal barrier to entrance into several kinds of useful and fairly well paid occupations. No business man in need of a stenographer, for example, would willingly and knowingly employ one whose early education has been neglected in this respect. . . . If a pupil leaves school at from twelve to fourteen a bad speller he must be lacking in capacity, or have attended school irregularly, or have been badly taught. There is for the ordinary pupil no mystery at all and not much difficulty in the evolution of a good speller; very much depends on the teacher of spelling. . . . It goes a long way to clearing up an apparently difficult situation to bear in mind several propositions that are or ought to be indisputable commonplaces: Spelling is really writing, and the letters put together to make written words are varying marks, absolutely conventional, and learned as such only by imitation; repeating the names of the letters that form a word is not 'spelling' the word, and, except in the case of those who are defective in the faculty of remembering visible forms, it should not be practised in schools, because it is as a rule a waste of time. Practice in spelling lists of detached words of which many occur very rarely in ordinary life is, for the most part, a useless exercise, because a large proportion of the errors made in spelling are due to the fact that the words are connected together to make sense, and the sense is always more important than the form. The most effective way to make

correct spellers is to make the pupils practise writing from dictation ordinary English words, making a piece of coherent text composed of a series of connected statements."

The Teaching of History

It may seem rather surprising that the competency of a teacher of History cannot be gauged by his academic standing, however splendid. The teachers of History, especially in the Collegiate Institutes, are among the best scholars in our schools, but the teaching of History, in very many institutions, leaves much to be desired. While it is true that the very best lessons I have heard have been taught by specialists, it is also true that specialists have taught some of the very worst. It is clear that scholarship must be strongly supported by various aids if the history lesson is to be effective. The main aids to success, often dismally absent, are three. Without careful daily preparation the teacher of History is lost in a quagmire of inaccuracy and uncertainty. Without enthusiastic zeal a deadly torpor seizes the class and nothing worth while is accomplished. Without variety, which rings constant changes in treatment and method, the judgment, the memory, the imaginations of the pupils are not keyed up to their highest capacity and achievement. It is by no means rare that the inspector hears a scholarly teacher flounder helplessly because of lack of serious preparation on the preceding evening. As to enthusiasm and zeal, they are mostly temperamental; and the teacher who lacks animation is to be pitied rather than censured. It may be, too, that lack of invention and initiative, which leads to monotonous methods, is largely due to causes beyond the reach of remedy. At any rate, the teacher who is well armed with this trusty triad of weapons—industry that never tires, zeal at a constant white heat, and sane versatility—will always succeed in interesting, in stimulating, and in instructing every pupil in his class. Confidence, alertness, and earnestness will thrive among pupils who are so fortunate as to have a teacher who possesses the three cardinal virtues I have named. But, oh! the inertia and languor which desolate a class whose teacher lacks the vital qualities.

The New Commercial Regulations

The new Commercial Regulations of 1915 reached the schools in September, a few weeks after opening day. Consequently, many Principals were obliged to revise their organization in October in order to satisfy the new requirements. Some Principals found difficulty in meeting the new demands at once. In schools with fully organized commercial departments the Principals should have summoned immediately the Advisory Commercial Committees in order to face the new situation. A few Principals failed to see the advisability of taking this step, and they were consequently ill prepared for the tests of the Inspector.

In my opinion, the new directions as to the accommodations and equipment of commercial departments are somewhat too complex and comprehensive for ordinary secondary schools, however suitable for the great Toronto School of Finance and Commerce. I would suggest that Regulation 4 (Pages 8 and 9), with appendix thereto, be simplified for the convenience of the Collegiate Institutes and High Schools. I find that most schools, a year after the issuing of these new directions, have taken no adequate steps toward carrying out the recommendations of Section 4. Certain minimum improvements should be made imperative.

Oral Composition

In my Report of 1915 I devoted considerable space to a discussion of the importance of English Composition (written), and I gave suggestions for the guidance of inexperienced teachers. On that occasion I promised to return at a later date to the subject of Oral Composition.

The subject of Oral Composition is a comparatively new one in our schools. It was introduced for the first time about twelve years ago. Separate organization of the composition classes for oral work came in a few years later still. Since the introduction of the subject very much real progress has been made by the earnest teachers of English. Much yet remains to be accomplished. The difficulties that harass the teacher of this variety of work in English Composition are innumerable and, in many cases, almost insuperable.

All teachers will admit that the main purposes of the teaching of Oral Composition are these: (1) To lead the pupils to strive to acquire a ready delivery; (2) to teach them to speak their mother tongue correctly; (3) to guide them to the most effective modes of oral expression of which they are capable, with due regard to the nature of the discourse and of the thoughts and sentiments of the speaker.

(1) *Ready Delivery.*—"Conference maketh a ready man", says Bacon. By "conference" he means, of course, "conversation" or "oral discourse". It is hardly necessary to say that Bacon does not mean one "conference" or two or six per annum, but oft-repeated conferences. In a word, the aim of the educator should be to lead his pupils to approach, as nearly as may be, in the class-room, in dealing with serious subjects, the degree of readiness which they constantly exhibit in their small talk on the street or in the freedom of their homes, when they are dealing with trifles light as air. Accordingly, every pupil should speak frequently,—every week, at any rate.

(2) *Correctness of Speech.*—This should be insisted on absolutely. Therefore the teacher should retain full control of the class at all times. When the teacher hands the activities of the class over to the pupils, allows the immature pupils to act as critics, and takes little or no part in the discussions which follow the pupils' efforts, almost nothing worth while is accomplished. The most glaring inaccuracies of speech and the most lamentable faults of delivery will go unnoticed amid the generous applause of the class. Even the formal debate leads to no good results if time is not found after the debate for thoughtful and adequate criticism.

(3) *Effective Modes of Expression.*—The young teacher, in endeavouring to aid his pupils in this regard, is in great danger of imagining that uniform methods are desirable. Within the bounds of general uniformity there should be a wide latitude in methods. The individuality of the pupils should have free scope. Only eccentricities and actual lapses should be the subjects of criticism.

The question of preparation for the Oral Composition hour is a difficult one. In my opinion, impromptu efforts are almost worthless in the class-room, as such efforts usually are in after life, in the pulpit, on the platform, and in parliament. In the class-rooms of our High Schools I have heard scores of Oral Composition lessons in which young pupils were allowed to expatiate extempore at will, and without a single exception I have always left the class-room with the conviction that the half-hour had been practically wasted.

The question of the use of manuscripts or notes is not so difficult. In no case should a pupil be permitted to use his manuscript, for the exercise is an oral exercise. If the pupil wishes to marshal his thoughts or arguments, and even to garb them in elegant form, by writing out his address at leisure, he should be com-

mended for his pains, but he should so thoroughly master his subject that he will need only a few notes when he addresses his class-mates.

A very useful form of Oral Composition may be based on the Socratic method of question and answer. All the pupils of the class should be required to brood over, and, if necessary, to read about, a certain subject. At the hour appointed the teacher should call on a pupil to discuss with him before the whole class some phase of the topic. By well directed queries, couched in as few words as possible, the teacher should exhaust the pupil's store of information or ideas concerning the matter under review. With another pupil and then another successive phases of the topic will be discussed. This method will severely try the teacher's own knowledge and skill and patience, but it will prove invaluable to the pupils, even to those who listen in silence to the "conference", as their own time will come in some future lesson for similar catechising.

Pitfalls in the High School Reader

It may be of some service to the teachers of Reading if I call attention to a few of the pitfalls into which, during the last ten years, pupils have stumbled on the occasions of my inspection of the classes. The list is by no means exhaustive.

(1) The notable example of the fatal facility of sing-song is, of course,

> "If the husband of this gifted well
> Shall drink before his wife." (Page 44)

Notwithstanding the ridiculous nonsense produced by the rhythmical reading of the lines and the formal warning given in the Introduction (Page 12), I have in all these years heard only three or four pupils read the passage with proper pauses and emphasis.

(2)
> "Our bugles sang truce, for the night-cloud had lowered
> And the sentinel stars set their watch in the sky;
> And thousands had sunk on the ground overpowered,
> The weary to sleep and the wounded to die." (Page 58)

Nearly always the pupil reads the last word of the first line as if it meant "descended." One would think that its rhyming word "overpowered" and the general meaning would guide the reader aright.

(3) Another signal example of the perils of sing-song occurs in "The Day is Done":

> "A feeling of sadness and longing,
> That is not akin to pain,
> And resembles sorrow only
> As the mist resembles the rain."

Here, of course, "only" modifies what follows, but it is nearly always by pupils grouped with "sorrow".

(4) The rhythm, too, is responsible for the very common misreading of these lines:

> "For a day and a night, a night and a day,
> Over the blue, blue round,
> Went on the chase of the pirate quarry,
> The hunt of the tireless hound." (Page 84)

Very few readers of this stanza make "chase" the subject of "went on".

(5) A strange blunder is made in "Barbara Frietchie", lines 49-50:

"And through the hill-gaps, sunset light
Shone over it with a warm good-night."

Nine pupils out of ten make the comma after "hill-gaps" an apostrophe and thus "sunset light" becomes the object of "through", and "shone" is left without a subject.

(6) The first two lines of "The Glove and the Lions" I have never heard a pupil read correctly, and I have heard at least 200 pupils read the lines. A moment's examination will show that "the court" is the subject of "sat looking on", not the object of "on". I have had difficulty in convincing some teachers that this can be the only proper interpretation, as is proved by line 17 of the poem—"King, ladies, lovers, all look on". It is unfortunate, I admit, that the word "court", sometimes meaning "an inclosed area", should have been used here, as a veritable trap lies before the unwary reader. I have never ceased wondering, however, that nobody has seen and avoided the pitfall.

(7) There is a sentence in the lesson "From the Apology of Socrates" which confounds nearly all readers:

"This is the prophecy which I utter before my departure to the judges who have condemned me." Almost always the sentence is read "my departure to the judges," although the first sentence of the paragraph shows that Socrates is speaking to the judges who have condemned him. It is a pity, of course, that Jowett, who knew well how to write good English, had not arranged the words in a better order: "This is the prophecy which, before my departure, I utter to the judges who have condemned me".

(8) Never once in ten years have I heard a pupil read correctly the famous passage from Macaulay's "Trial of Warren Hastings": "The gray old walls were hung with scarlet. The long galleries", etc. Always the third and fourth sentences are murdered. The initial word "There" is read as a light expletive, and not, as it should be read, as an emphatic adverb, referring to the great hall of William Rufus. The force of the word "There" begins to dawn on the stumbling reader as he proceeds on his way through the paragraph, for five sentences in succession begin with the word "There", and five sentences of the following paragraph for clearness and vividness carry on the same sentence-formation.

The Pupils' Collections of Insects, Plants, and Woods

The pupils in Science of the first year are expected to make collections of insects, and the pupils of the second year to make collections of plants and woods. These collections are now regularly made in all the schools, and, for the most part, the collections of insects and plants are admirable and meet the purpose intended. The collections of woods, however, are rarely satisfactory. In most schools the science master has been satisfied if his pupils have handed in ten specimens of wood in an early stage of growth—mere cuttings from twigs. The collection of such specimens is of no educational value whatever, as the bits of immature wood do not constitute a collection of economic woods. As the schools have now struggled with the problem of wood collections for six or seven years, and, in nine cases out of ten, have struggled in vain, I would suggest that, instead of insisting on individual collections of woods, each school should be required to have in its museum approved specimens of all common economic woods, including all woods obtainable in the locality. The pupils should then be required to learn from these museum specimens to distinguish the different woods by the inspection of bark and grain.

Reading Rooms

It seems strange that only four or five High Schools in the Province have Reading Rooms. Even the large Collegiate Institutes having separate library rooms have not fully organized Reading Rooms or Reading Room Sections in the Library. An adequate knowledge of current literature, current events, and current movements, can be obtained only by the constant reading of current magazines and journals, and these periodicals should be conveniently available for teachers and for pupils. Where no separate room is to be had, arrangements can easily be made for placing a reading table in each class-room. A half-dozen of the best English, Canadian, and American monthlies, and a few weeklies and dailies, would make a fair beginning. In addition to the educational value of the Reading Room there are very real advantages accruing. The most considerable of these advantages is the pleasant and profitable occupation of the pupils at periods of intermission,—the morning and afternoon recess, and the noon hour for those who bring their mid-day meal to school. The *Illustrated London News, Punch, Harper's Magazine,* or a Toronto daily, will be more attractive to mischievous pupils than the usual temptations of the idle spaces of the day.

I have the honour to be, Sir,

Your obedient servant,

Toronto, December 30th, 1916. J. E. WETHERELL.

II. REPORT OF INSPECTOR SPOTTON

To the Honourable R. A. Pyne, M.D., LL.D.,
Minister of Education for Ontario.

Sir,—I have the honour to report as follows upon the schools in my inspectorate for the academic year 1915-16.

During the year I inspected the Collegiate Institutes at Kitchener (Berlin), Brantford, Chatham, Galt, Ingersoll, London, Ridgetown, Sarnia, St. Mary's, St. Thomas, Strathroy, Stratford, Windsor, Woodstock, and the following in the City of Toronto, viz.: Harbord Street, Humberside, Jarvis Street, Malvern Avenue, Oakwood, Parkdale and Riverdale, 21 in number, and the High Schools at Amherstburg, Aylmer, Dutton, Essex, Forest, Georgetown, Glencoe, Hagersville, Leamington, Lucan, Oakville, Paris, Parkhill, Petrolea, Port Dover, Port Rowan, Simcoe, Streetsville, Tillsonburg, North Toronto, Vienna, Wardsville, Waterford, Watford, and the Toronto High School of Commerce, 25 in number, making a total of 46 schools. This list corresponds to the list of schools inspected by me in the previous year, with the addition of the High Schools at Aylmer, Dutton, Petrolea, Port Rowan, Simcoe and Watford.

I also inspected, as in the previous year, the Night High Schools in Harbord Street and Jarvis Street in the City of Toronto, and the Evening Classes and three branch schools connected with the Toronto High School of Commerce.

In my report of last year I explained that the private schools of the Province, at which candidates were being prepared for Departmental examinations, demand-

ing practical training and proper equipment for the work taken up, were invited to apply for an inspection, in accordance with the Regulations. Applications were received from sixteen of these schools, and as it was considered desirable, in the case of the first inspection, that one Inspector should visit all the private schools, I undertook this work by direction of the Minister. For the year 1915-16, however, the work of inspecting the private schools was divided up among the three Inspectors, and accordingly I visited and reported upon the following: St. Anne's School, Kitchener (Berlin); the Ursuline College, Chatham; St. Angela's College, London; St. Mary's Academy, Windsor; the Loretto Convent, Stratford; and Alma College, St. Thomas.

As the ground traversed by me during the two years is so nearly the same, and the general conditions so little changed, my report for this year will necessarily contain little that is new.

Accommodations

The situation in regard to accommodations is practically the same as at last report. The improvements foreshadowed in regard to the Collegiate Institute at Windsor and the Toronto High School of Commerce have been pushed forward, the latter having been transferred from its temporary quarters in the old Clinton Street Public School to its splendid new home in Shaw Street, and work on the extensive additions to the former being in a satisfactory state of progress. At London, where the increasing congestion of classes had been a cause of anxiety, the proposition to erect another High School building in the eastern part of the city in order to afford relief, has been abandoned, for the present at least, in favour of the establishment of a fully equipped technical school in a more central situation The expectation is that, with the advantages of such a school prominently in view, many who would otherwise take the regular High School courses will be attracted by the industrial courses offered in the technical school, and the over-crowding of the Collegiate Institute will thus be relieved in a natural manner. The experiment is well worth trying and there can, I think, be no doubt about the success of the new school, but I believe that sooner or later additional High School accommodation proper will have to be provided. Meantime the crowded commercial classes have been relieved by the opening of branch classes in a suitable building in the eastern part of the city. I inspected this branch commercial school on the occasion of my visit to London, and found a satisfactory organization for a two years' course, under a staff of two very competent teachers.

The need of improved accommodations to meet the natural expansion of a considerable number of the schools is felt and acknowledged by the local authorities. With the development everywhere of the work in Art, coinciding with the rapid increase in the number of teachers holding professional Art certificates, a natural desire is felt to have a special Art room set apart for instruction in this department, and, similarly, with the greatly increased attention to the work in Physical Culture, corresponding to the improvement in the qualifications of the instructors, the need of the space that would be afforded by an assembly room or a gymnasium, or better still, by both, is forced upon the attention of the authorities. And, apart from these special demands, the cases are by no means inconsiderable where more ordinary class-room space is essential to the thorough organization of the work. In some cases the laboratory is pressed into the service as a class-room—always an undesirable arrangement; in other cases the highest form leads a nomadic existence, moving about from one room to another as the seats happen to be temporarily

vacated; but in most cases of excessive attendance the pupils—sometimes to double the number that efficiency would recognize as sufficient—are crowded into one room or another, with results that cannot possibly be satisfactory, no matter what may be the skill of the teacher. These difficulties, I have said, are felt and recognized, as I have found in conference with the authorities, and I am satisfied that were it not for the special conditions resulting from the war, and the feeling everywhere prevailing that all except the most necessary expenditures should be deferred, steps would be taken in most cases to provide the necessary remedies without unnecessary delay.

As this report is being prepared, news comes of the destruction by fire of the recently completed Collegiate Institute building at Barrie. Some $80,000 had just been spent in improvements, and the reconstructed building was undoubtedly one of the most commodious in the Province. The total loss, including furnishings and equipment, is estimated at $100,000. The Barrie School is one of the oldest in the country, having been established as the Senior Grammar School of the County of Simcoe in 1843. Under the principalship of the Rev. W. F. Checkley, M.A., the school long enjoyed a very enviable reputation as a preparatory school for intending university students, and many men, subsequently prominent in many walks of life, received their early training there. The present writer feels a special interest in the fortunes of the school, having succeeded to the principalship in 1868, and having continued in office for the twenty-three years following. The sympathies of the public will go out to the town, and especially to the Board of Education, to the staff and to the pupils in their misfortune. The energy of those immediately concerned will undoubtedly find means of carrying on the activities of the school pending measures for the erection and equipment of suitable new premises. It is satisfactory to know that the insurance on the burned building will form a very substantial offset against the loss.

Reading, Spelling and Writing

In accordance with the usual practice, I tested the Reading, Spelling and Writing of the Lower School pupils in all the High Schools and Collegiate Institutes visited. In practically all cases I selected for the Reading test pupils who had had at least one year's training in the High School. Because of this year's training I fixed the standard of excellence at rather a high mark. I examined individually in Reading 1,237 pupils, and of these I estimated 52 per cent. as good, 43 per cent. as fair, and 5 per cent. as poor, and I considered this, on the whole to be a creditable showing. In Spelling I confined my tests to first year pupils, with a view of forming an opinion as to the adequacy of the preparation in this subject previous to entrance to the High School. I examined 1,817 pupils, and of these, with a standard which I judged would be reasonable for entrance candidates, I estimated 39 per cent. as good spellers, 36 per cent. as fair, 22 per cent. as poor, and 3 per cent. as bad. This showing I considered might easily be improved upon. In Writing I examined 1,691 pupils of first year standing, and of these I estimated, using again what I considered a fair entrance standard, 41 per cent. as good, 46 per cent. as fair, and 13 per cent. as either poor or bad. In connection with the Writing, I may say that it is still quite apparent that sufficient care is not taken with the pupils previous to entrance to insist upon proper methods of holding the pen, and proper position in relation to the desk. In one school which I visited this year I found an exceptionally satisfactory showing in these particulars, and I have

no doubt that this was to some extent owing to the fact that the teacher had provided and kept constantly in view of the pupils a plaster cast of a hand holding a pen in a sensible way.

Organization of Small Schools

An important question has arisen in connection with the organization of the work in the smaller schools, more particularly those in which the staff consists of two teachers only. The Regulations provide for a limitation of the courses which may be taken up in these latter schools, Upper School courses being excluded, and Lower and Middle School courses being restricted within certain lines. All these schools make provision for first and second year Lower School forms and a Middle School form, three forms in all. As there are but two teachers, while there are three forms, the difficulty of constructing a satisfactory time-table is very considerable, and so it has happened that very commonly two classes of different grades (first year and second year classes, or second year and third year classes) are grouped together in some subjects for teaching purposes. Care has generally been taken in making these groupings to select such subjects of study as appear best adapted for the purpose, and involving least injury to the pupils concerned by reason of the grouping, but an inspection of the time-table has not infrequently shown most objectionable combinations, and has revealed the fact that an undue proportion of time, considering the proportionate number of pupils involved, has been given up to the Middle School. This condition has, during the last year or two, been aggravated by the provision made in the Regulations for giving "bonus" marks at examinations for certain subjects such as Book-keeping and Writing, Manual Training, etc., not included in the obligatory examination list, and it has consequently become necessary to surround the introduction of these bonus subjects into the school curriculum with rigid safeguards. In particular, it is stipulated that adequate provision must first be made on the time-table for the prescribed subjects taken up, before the bonus subjects can be considered, and combinations of classes of the first and second years of the Lower School courses are forbidden.

I have had occasion to take up with a number of principals the question of reconstructing the time-table so as to conform to the Departmental instructions, and I am glad to be able to say that I have met with a ready and sympathetic response. The principalship of a two-master school, however, is a difficult position requiring great tact and good judgment, and I confess that I feel in regard to every one of these schools that the comfort of all concerned would be greatly enhanced and the general efficiency of the school vastly promoted by the enlargement of the staff to three just as soon as local conditions would permit.

The War and the Schools

All classes of the community have been affected by the war, and the schools are playing their part. Many teachers have given up their positions, and boys of the higher forms have left their desks to assist in the attainment of the righteous aims for which the Allies are fighting. The scarcity of farm workers, too, resulting from enlistment, suggested the possibility of the places of these workers being filled during the busy months by pupils attending the schools. In order to encourage enlistment and farm employment of eligible pupils, the Department, in March last, issued circulars announcing the conditions under which such pupils would be exempted from various examinations for which they might be preparing, and recommended "both the Inspectors and the teachers concerned to deal as liberally

as practicable with the situation." The University Matriculation Board, also, at a meeting held early in April, decided "to accept for the examinations of 1916 the principle of the Regulations recently issued by the Minister of Education in respect of candidates who enlist for overseas service or who engage in farm work," and accordingly arranged to consider special applications for Pass Junior Matriculation.

On the ground of farm employment the total number of applications dealt with, from High Schools and Collegiate Institutes was 1,632, and from Continuation Schools 341, 1,973 in all. Of these a total of 1,551 applications were favourably considered and certificates of standing granted. On the ground of enlistment 395 applications for certificates were favourably considered. The principal exemptions were as follows:

Lower School examination	637
Middle School examination	154
Middle School and Junior Matriculation	406
Junior Matriculation	392
Upper School, Parts I and II	9
Upper School, Part I	97
Upper School, Part II	99

Provision is made by the Department and the Matriculation Board to continue similar exemption arrangements for the examinations of 1917.

I have the honour to be, Sir,

Your obedient servant,

Toronto, December, 1916. H. B. SPOTTON.

III. REPORT OF INSPECTOR HOUSTON

TO THE HONOURABLE R. A. PYNE, M.D., LL.D.,

Minister of Education for Ontario.

SIR,—I beg to submit for your consideration a brief report on the condition of the schools under my supervision during the school year 1915-1916.

I have the honour to remain, Sir,

Your obedient servant,

J. A. HOUSTON.

December, 1916.

Schools Visited

During the year I had the pleasure of visiting the Collegiate Institutes at Barrie, Collingwood, Clinton, Fort William, Goderich, Guelph, Hamilton, Niagara Falls, Owen Sound, Orillia, Port Arthur, Seaforth, St. Catharines, and North Bay, and the High Schools at Alliston, Arthur, Aurora, Beamsville, Bradford, Brampton, Caledonia, Cayuga, Chatsworth, Chesley, Dundas, Dundalk, Dunnville, Durham,

Elora, Fergus, Flesherton, Gravenhurst, Grimsby, Haileybury, Harriston, Kenora, Kincardine, Listowel, Markdale, Meaford, Midland, Mitchell, Mount Forest, Newmarket, Niagara Falls South, Orangeville, Parry Sound, Penetanguishene, Port Elgin, Sault Ste. Marie, Shelburne, Smithville, Sudbury, Thorold, Walkerton, Waterdown, Welland, Wingham, and Wiarton, a total of 14 Collegiate Institutes and 46 High Schools.

In addition to these I also visited the following private schools in accordance with instructions received: The Loretto Academy, Guelph; The Loretto Day School, 385 Brunswick Avenue, Toronto; The De la Salle Training School, 28 Duke Street, Toronto; The Loretto Academy, Hamilton; The Loretto Abbey, 403 Wellington Street, Toronto; Pickering College, Newmarket, and St. Joseph's Convent, 204 Park Street, Hamilton. This makes a total of 66 schools which I had the pleasure of visiting during the year.

As a tabulated statement of the grading of the various items in the accommodations of these schools was given in last year's report, as well as statistics of the standing of the pupils in Reading, Writing and Spelling, I shall not deal with that side of the subject now. There has been no marked change in any respect, such as would justify any detailed statement of figures.

Changes

There are no new buildings or even substantial additions to report. The improvements which were under consideration at the time my last report was written have been held in abeyance, owing to existing financial conditions, and the probabilities are that matters will remain *in statu quo ante* until a change comes which will justify the Boards in undertaking the necessary expenditure. The labour market has been so uncertain, the prices of material have been so advanced, and there have been so many other calls that it has been thought wise to postpone building wherever possible, and the Department has demanded only such expenditure as was absolutely necessary for the proper training of the pupils.

I find many changes in the staffs of the schools owing to the teachers having enlisted for overseas service. Amongst the principals who have donned khaki are Cowles of Dunnville, Wright of St. Mary's, Amos of Grimsby, Pentland of Beamsville, and amongst the assistant masters are Grandy of Barrie, Atkinson of Collingwood, Ewing of Wingham, Worden of Guelph, Vandersluys of Niagara Falls and Bell of Niagara Falls South, and no doubt there are others of whom I have no knowledge. I am pleased to learn that in the great majority of cases these teachers have been given leave of absence by their Boards, and their positions are waiting for them when they return. The teachers of the Province, whether High School or Public School, may well be proud of the fact that over 300 of their number have offered their services in fighting the battles of the Empire in support of the principles of righteousness, honour and justice.

A very marked change is the decreased attendance, especially in the senior forms, as compared with the attendance of the preceding year. For a time after the war broke out the attendance in the schools increased, owing possibly to the general stoppage of the business machinery of the country and the consequent lessening of employment, but all that has since changed. The elder boys have nearly all enlisted. I was told of one form of Upper School boys which began in September, 1915, with sixteen members, and closed in June, 1916, with two; the other fourteen were preparing for the front. The younger boys and many of the girls have dropped out of school to go to work; there is no lack of employment; many

High School pupils are carrying on the work which had been done by those who are serving the Empire. Hundreds of pupils also took advantage of the opportunity of working on the farms, and having their certificates granted to them by the Department of Education or the Matriculation Board.

English Composition

I endorse every word said by Inspector Wetherell in his report last year as to the necessity of paying more attention to the matter of English Composition and of giving the subject the amount of time which its importance demands. I find a tendency to cut down the time given to Composition, especially in the Lower School, where it is not a direct subject of examination. Such a policy is but a temporary expedient to gain time and is fatal to future success. To give six lessons a week to Latin and two to English Composition cannot be defended on any ground. I am pleased to be allowed to give here the explanatory notes on the report on this subject furnished by Mr. Ogilvie of Fort William, and I trust it may be suggestive and helpful.

Notes on Composition Report of Forms IV and V

"Two periods are generally given to the writing of each Class Composition. In Form V the time-table is so arranged that there are two consecutive English periods on Tuesday. Advantage is often taken of this for class work.

"The time spent by a pupil in and for the Composition classes is very small when compared with the time he really spends in composition—in expressing his thoughts in speaking and writing. There is a danger also that the pupil will look on Composition work as something which has no place beyond the walls of the class room, in either the work of the school or the work of the world. For these reasons I have tried to direct the pupil's composition outside of class as much as possible.

"As an aid to the work in Composition I think that our school paper deserves special mention. It is most popular with the students who work hard to make it a success. As it is read before the Literary Society, and its best material is published in the city paper, the editor and sub-editors do their very best work and will not accept matter which is not worth while. Its essays, short stories, and special articles have been decidedly good. The paper gladly accepts good essays or short stories which have been prepared for Composition classes. Students like to have work appear in the paper and so do the classes. One department of the paper keeps in touch with ex-students of the school, particularly with the boys who have enlisted. This means much work, but the boys appreciate it. Every number of the paper contains four or five letters from the front. The whole school and community is, of course, interested in them. From the work of the paper this year I think that it is of value to the school and certainly of value to the work in Composition.

"In the above classes the last Composition period of each week is generally given over to oral work. Not more than one or two class debates are planned for the year. The oral work is also correlated with Supplementary Reading. Each pupil is required to give two oral compositions based on books read. In the Literature and History classes pupils give reports on assigned topics and discussions are encouraged. Students are also encouraged to take part in speaking and debating before the Literary Society. Credit is given for this. A student who gives a good oral composition before the Literary Society receives the same credit for it as if it were given in class. He is thus exempt from a similar piece of class work and is marked for the value of his work. (I am inclined to think that prepared speeches given in the Literary Society should receive a bonus over similar ones given in class.)

"Each year we try to stress certain work in composition which is really done outside of class. Last year students from these forms presented "The Merchant of Venice." This year we have given special attention to the school paper and to speaking before the Literary Society. This work was ended by an evening debate on the Single Tax."

In another Institute I found a plan of operation which appeared to me to have many excellences. No lessons were assigned for Friday afternoon; that half day was regularly given to examinations and to Composition. One full afternoon each month was assigned to English Composition, and this in addition to two other regular periods each week. This plan of giving a full afternoon allowed a style of work to be undertaken which could not be attempted under the usual division of time. The Principal assured me that the results were eminently satisfactory, better than he had been able to secure in any other way.

Elementary Science

In connection with this subject I may be pardoned if I refer, as I did once before, to certain possible dangerous tendencies which I have noted at times in the work of the younger teachers, and from which I must confess even the older and more experienced are not altogether free.

(1) Too much attention is often paid to isolated facts, and to the gaining of information on certain points, while the training of the observing and reasoning powers is forgotten, and there is a failure to encourage that spirit of investigation which is inherent in every child.

(2) Any attempt to carry on the work without specimens, or with possibly one or two for a whole class, is bound to result in failure. Children can always be interested in life and action, development and function, but the opportunity must be given them.

(3) There is a tendency to magnify the importance of the records at the expense of the results; the records should be merely the pupil's own account of what he has done, the evidence that the course has been properly covered.

(4) Outdoor work, the most interesting part of the whole course, is allowed to take a secondary place, or is given no place at all.

In this connection I published two years ago an outline of outdoor work carried on by a very successful teacher. I am now allowed to give an outline of outdoor work as arranged by Mr. Madill, of Fort William Collegiate Institute. It is quite different from that given in the former report and a comparison of the two schemes in detail is somewhat interesting.

ELEMENTARY SCIENCE.

BOTANY

FIRST YEAR

Outdoor Notes.

September and October.

One topic on a page. Notes showing date, place, identification, and brief description.

Topic	1. Annuals, minimum	5, e.g., Sweet pea, nasturtium, mustard, etc.
"	2. Biennials	3, e.g., Carrot, beet, turnip.
"	3. Perennials	5, e.g., Clover, grass, trees, etc.
"	4. Climbing and twining plants	2, e.g., Sweet pea, morning glory.
"	5. Leaf arrangement for light..	3, e.g., Maple, dandelion, buttercup.
"	6. Seed dispersal	2, e.g., Dandelion, thistle.

Topic 7. Fruits, structure	5,	e.g., Pea, shepherd's purse, grape, etc.
" 8. Change of colour of leaf	3,	e.g., Maple, poplar, etc.
" 9. Time of falling of leaf	3,	e.g., Maple, poplar, etc.
" 10. Scars on trees and shrubs ..	2,	e.g., Pine, rose.
" 11. Winter buds	2,	e.g., Poplar, lilac.
A collection of leaves, pressed and mounted	20,	e.g., Buttercup, clover, poplar, etc.

April, May, June.

Topic 1. Opening of buds, minimum ..	3,	e.g., Poplar, lilac, willow.
" 2. Time of leafing	3,	e.g., Poplar, lilac, willow.
" 3. Time of planting of seeds...	3,	e.g., Sweet pea, radish, oats.
" 4. Time of flowering of plants..	3,	e.g., Willow, marsh marigold, dandelion.
" 5. Flowers visited by insects ...	2,	e.g., Willow, dandelion.
" 6. Seeds, shapes and markings..	3,	e.g., Bean, corn, morning glory.
" 7. Spring flowering plants	3,	e.g., Marsh marigold, violet, etc.

ZOOLOGY

First Year

Outdoor Notes.

September and October.

One topic on a page. Notes showing date, place, identification, and brief description.

Topic 1. Insects, minimum	4,	e.g., A grasshopper, a fly, a butterfly, a bug.
" 2. Spiders, webs	2,	e.g., Grass, cobweb.
" 3. Birds (1) Summer	6,	
Domestic	3,	e.g., Goose, duck, pigeon.
Wild	3,	e.g., Gull, sparrow, woodpecker.
(2) Winter	2,	e.g., Grosbeak, snowbunting.
A collection of Insects, mounted and named		e.g., Monarch butterfly, sphinx moth, etc.

April, May, June.

Topic 1. Insects, minimum	3,	e.g., A mosquito, a beetle, a dragon fly.
" 2. Fish	2,	e.g., Bass, trout.
" 3. Amphibians	1,	e.g., A frog.
" 4. Birds, wild. Arrival and Identification	12,	e.g., Robin, crow, song sparrow, canary, hawk, etc.

BOTANY

Second Year

Outdoor Observations.

September and October.

One topic to a page. A more minute description than in First Year.

Topic 1. Composites, minimum	4,	e.g., Dandelion, aster, thistle, yarrow.
" 2. Weeds	6,	e.g., Mustard, shepherd's purse, plantain.
" 3. Fungi	3,	e.g., Mushroom, mold, shelf fungus.
" 4. Nodules on roots	2,	e.g., Clover, sweet pea.
" 5. Climbers and twiners	2,	e.g., Nasturtium, hop.
" 6. Seeds of Weeds	4,	e.g., Dandelion, thistle, mustard.
" 7. Opening and closing, flowers, leaves	2,	e.g., Dandelion, clover.

Collection of:—

1. Plants pressed and mounted:		
(1) Composites, minimum ...	4,	e.g., Dandelion, aster, thistle, yarrow.
(2) Weeds	6,	e.g., Mustard, shepherd's purse, plantain, etc.
2. Woods: Cut and mounted	10,	e.g., Poplar, willow, pine, etc.

April, May, June.

Topic 1. Trees: Height, branching, bark, etc., minimum	3,	1 shrub, e.g., rose; 1 evergreen, pine; 1 deciduous, willow.
" 2. Catkins on trees	2,	e.g., Willow, poplar.
" 3. Ferns	1,	e.g., Polypody.
" 4. Fungi	1,	e.g., Puffball.
" 5. Plant Societies	2,	e.g., A forest, roadside, garden, rock, pond, meadow, marsh.

At least three plants in each society.

A collection of plants with flowers. Those studied in class. Representatives of several orders.

1. Trees, minimum	2,	e.g., Willow, poplar.
2. Monocotyledons	1,	e.g., Trillium.
3. Dicotyledons	9,	e.g., Marsh marigold, violet, strawberry, etc.

ZOOLOGY

Second Year

Outdoor Observations.

September and October.

One topic to a page. A more minute description than in First Year.

1. Insects, minimum	4,	e.g., A butterfly, a moth, a bee, a beetle.
2. Spiders	2,	e.g., Grass, cobweb.
3. Birds	6,	
Domestic	2,	e.g., A swimmer, a scratcher.
Wild	4,	e.g., A diver, a percher, a seed-eating, and an insect-eating.
4. Mammals	6,	
Domestic	4,	e.g., A one-toed, a two-toed, a four-toed, a five-toed.
Wild	2,	e.g., Rabbit, squirrel.

April, May, June.

A more special study of habits, etc., of a small number.

1. Insects	2.	Your choice.
2. Fish	1.	"
3. Amphibians	1.	"
4. Reptiles	1.	" e.g., A snake.
5. Birds	2.	"
6. Other animals	3.	" e.g., Crayfish, clam, wood louse.

Pictures

I am pleased to note that as time goes on more use is being made of projection lanterns for the purpose of illustrating the work in class. Educators have been slow to recognize the educational value of pictures, and especially of the "movies." They are here to stay, however, and our business should be not to condemn them but to enlist them for human service. Pictures are a universal language, and have always been used to convey information. Nowadays the alphabetic language and the picture language are supplementary; no text is looked upon as complete without both. Very often a failure in language work, either oral or written, is due to haziness of impression rather than to sheer lack of knowledge. In History, Science, Literature, Geography, pictures, whether from slides, cards, or films, will deepen and fix impressions, and make clear and definite that which without them might be cloudy or hazy.

Moving pictures or pictures of any kind will save time, not waste it. Their main value is for information only, not for mind training, except in a limited sense, and in this connection they can be used in College, Collegiate or Kindergarten either to simplify or to amplify knowledge. Certain kinds of information may be had from films or pictures more correctly than from any lecture or text, and in one quarter the time, and many things can be taught in no other way.

I find that a good lantern with a reflectroscope attachment is now an essential part of the equipment in most of the leading schools, and in a few cases I have found moving pictures in regular use. The outlay is not very great, and if a demand be created for slides or suitable films, producers will be quick to seize the opportunity of providing them. As a matter of fact a very good selection of films is now available, and they may be rented and changed from week to week as desired.

Current Events

This is a topic which often receives but scant attention, the more's the pity. Matters have improved somewhat since the study of the war has been made a specific requirement in the departmental and matriculation examinations, but there is still room for advance. There seems to be a difficulty in finding a place for it in the regular day's work. In one four-master school I found a plan in operation which solved two difficulties, namely, provision for a suitable amount of time in Physical Culture and also in Current History. The plan is peculiarly applicable in a school of three, four and five masters where the Physical Culture work has to be taken in the ordinary class rooms. The school was divided into two sections, senior and junior, each section containing both boys and girls. An ordinary 30 minute lesson period was assigned each afternoon to Physical Culture and Current Events. The boys of the junior section were taken by one teacher in one class-room, the girls of the same section in another class-room in Physical Training for one-quarter of an hour. During this quarter of an hour the principal took the whole senior section in a review of Current Events, Civics, War, etc. Then the sections changed; the principal had the junior section for the second quarter hour, and the seniors had Physical Training. The Science master had the whole half hour for his own laboratory work. Thus every pupil had every day fifteen minutes of good lively work in Physical Culture, using wands, dumb-bells, etc., and every day the same time was spent in discussing current events. The plan worked admirably and the pupils did not become tired of either the Physical Culture or the work in History.

Written Work

In spite of all that has been said in reports and regulations, I still find in many classes whole books filled with practically dictated notes which the pupils are expected to memorize and which comprise all they are supposed to know of the subject in hand. This is especially the case in History and Geography, two subjects in which the authorized texts are of such a character that no dictation of notes should be necessary: the texts themselves are all the notes needed. The practice weakens the pupil's powers, destroys his initiative and self reliance, and is objectionable from any point of view. The "principle of ease" seems to be the only excuse for it: it is the easiest way to cram the pupils for examination, and the same notes can be used year after year.

There appears to be too much written class work done in nearly every subject and much too little oral work, in which the time could be more pleasantly and profit-

ably spent. Speaking generally, it would be wiser to use written exercises for review work only, and oral exercises for the ordinary class recitations. There is a deadly monotony writing out proposition after proposition in geometry, for example, or in daily putting on the board work largely copied from the note books, or worse still, in writing work in scribblers, much of which is never seen by the teacher. A good oral exercise, well conducted, will arouse interest and stimulate the class to do their best; it will enable the teacher to test the style of preparation; he will find out who is doing the work himself and who is depending on others; he will know where to assist and where to reprove; he will have a thorough grasp of the whole situation so far as the members of the class are concerned, and will be in a position to act accordingly.

Art and Physical Training

The work in Art and Physical Culture continues to increase in excellence. Year by year the advance in the quality of the work is most marked and fully justifies the regulation that these subjects should be taught only by those who have received special training. There are now a large number of very good Art Classes in the Middle School Forms, and the work in Physical Culture is making equally good progress considering the adverse conditions under which it must often be carried on, owing to lack of equipment and suitable accommodations. The summer schools have been well attended and the teachers are loyally endeavouring to fit themselves for the highest degree of efficiency in their particular branch of human service.

The events of the past two years have drawn attention to the value of Physical Training as nothing else could have done. Teachers and parents alike are realizing its value and its importance as a means of developing the pupil's physical being and at the same time of arousing and training his mental and moral faculties. It not only preserves health and establishes mental and physical alertness and control, but it teaches habits of obedience, emphasizes the necessity of co-operation, and instils a love and respect for fair play and honourable dealing. The subject is now being given its proper place in our school time-tables and the character of the work done is generally creditable. Of the 60 schools mentioned in section I of this report, 16 were given grade I in Physical Culture, 25 received grade I-II, 8 grade II, and 11 were not formally graded, owing to technical difficulties rather than to the style of work.

In the light of recent events Canadians can well understand the viewpoint of those who reason, " (1) Canada's greatest problem now and after the war is the character of Canada's citizens, (2) the quality of Canada's citizenship is determined in the schools and teaching centres of Canada's youth, (3) training for citizenship should be obligatory, not voluntary, (4) one of the fundamental duties of citizenship is Defence of Country, (5) hence, the necessity of impressing early upon Canada's young citizens the responsibility of citizenship, by making some system not only of physical but of military drill obligatory in every Canadian school."

APPENDIX D

REPORT OF THE DIRECTOR OF INDUSTRIAL AND TECHNICAL EDUCATION

To the Honourable R. A. Pyne, M.D., LL.D.,

Minister of Education for Ontario.

Sir,—I have the honour to submit herewith my Annual Report on Industrial and Technical Schools.

Progress of Industrial and Technical Education

The Industrial Education Act, which provides the authority under which the Industrial and Technical Schools of the Province are established, has now been in operation for five years. It is fitting, therefore, that I should review briefly in this Annual Report the progress of the development of the industrial and technical educational work undertaken under the direction of the Department of Education.

In 1909 the Minister of Education, in response to the public interest awakened in technical education, commissioned Dr. Seath, the Superintendent of Education, to report upon a desirable and practicable elementary system of technical education in Ontario, after inquiry into those already existing in other countries. In accordance with his instructions he examined the systems in England, France, Scotland, Germany, Switzerland, and the United States. Dr. Seath's report was published in 1910 and his recommendations were embodied in the *Industrial Education Act* passed by the Legislature in 1911.

This Act empowered municipalities to establish, with the consent of the Minister of Education, industrial and technical schools and to provide for the support of such schools by general taxation. The Legislature voted a sum of money to assist municipalities in the maintenance of these schools.

Progress as Shown by the Number of Schools Established

The response of the municipalities was remarkable. Eight schools were established in the academic year 1911-12; seven additional in 1912-13; fourteen in 1913-14; five in 1914-15; and, so far, eight new schools have been opened this year. At present there are only two urban municipalities with a population of over eight thousand that have not established schools, and one of these has provided sufficient money in the estimates to make a liberal beginning next autumn. Most of the smaller towns that are industrial centres have established schools.

Seven municipalities have organized day schools, four of these being full-time industrial schools, and three being technical departments of High Schools.

Progress as Shown by Attendance of Pupils

The rapid growth of the work is also shown by the increase in attendance of pupils in the various subjects of instruction from year to year. The following diagram shows graphically the attendance by subjects for the years indicated:

Progress as Shown by the Amount of Money Spent by Municipalities in the Support of Industrial and Technical Schools

The steady increase in the amount of money spent by municipalities in support of industrial and technical schools is one of the most obvious signs of the progress of industrial and technical education. During the last three years the following sums have been spent on salaries:

Day Schools.

1913-14	$54,013.92
1914-15	58,566.99
1915-16	93,738.61

Night Schools.

1913-14	57,104.02
1914-15	64,524.02
1915-16	78,251.20

In addition, some of the municipalities have spent large sums on capital account in erecting buildings and providing equipment. Hamilton was the first to erect a building for the purpose of technical education. The building and equipment cost $100,000. The school has now outgrown the building and the Board of Education has purchased at an expenditure of $75,000 a site on which it purposes to build a new school. Toronto opened last year a Technical School which cost for site, building, and equipment over $2,000,000. Two years ago London purchased a site for a new technical school and plans for a most complete building were prepared. The more important parts of the building, including class-rooms, workshops, laboratories, offices, etc., are being erected: later the building will be completed in accordance with the plans by adding an assembly hall, gymnasium, swimming baths, etc. The total cost of building, site, and equipment will in the end possibly amount to $350,000. At Windsor a new building is being erected in connection with the Collegiate Institute and the old building is being remodelled. The completed building will have all modern appointments and will provide accommodations for both day and night industrial classes. The cost of the improvement will be $200,000. Ottawa this year purchased a property that had been utilized for college purposes. The building has been reconstructed for use as a vocational school in which both commercial and industrial classes are established. The cost of property and reconstruction amounted to over $200,000.

Progress as Shown by Legislative Grants Earned by Municipalities

The liberality of the Legislative grants offered has been the chief inducement which has led municipalities to establish schools, and the opportunities for organization made possible by the money supplied from these grants, coupled with the public demand for instruction of the kind offered, account for the establishment of so many schools in such a short period of time. The grants are apportioned to the schools on the basis of the amount paid for the salary of teachers, upon the accommodations, and upon the equipment provided.

The grant on salaries is apportioned as follows on the total salaries of the staff: In cities with a population of 150,000 and over, one-third; in other cities, one-half; in towns, two-thirds; and in villages, five-sixths. The maximum for day schools is $5,000 and for night schools $3,000.

On equipment there is an initial grant of 40 per cent. on the cost of new equipment provided in any year and 20 per cent. on the same equipment for each of three succeeding years, the maximum for day schools each year being $2,000 and for night schools $1,000.

The grant on accommodations is apportioned under a scheme which takes into account the adequacy and the suitability of the school grounds, school buildings, class-rooms, workshops, laboratories, heating, lighting, etc.

The progress of the industrial educational movement is shown by the grants earned under the above scheme. The following table gives the totals:

Year	Grants Paid for Day Industrial Classes	Grants Paid for Night Industrial Classes	Total Grants Paid for Industrial Classes
1911-12.....	3,400.00	1,980.26	5,380.26
1912-13.....	22,174.97	14,953.51	37,128.48
1913-14.....	26,841.15	29,393.95	56,235.10
1914-15.....	21,966.84	32,644.94	54,611.78
1915-16.....	24,313.49	33,879.16	58,192.65
	$98,696.45	$112,851.82	$211,548.27

The apparent decrease in day school grants for 1914-15 and 1915-16 was due to a change in the basis of distribution.

The Character of the Education in Industrial and Technical Schools

The *Industrial Education Act* provides for the organization of: (1) Day Schools as follows: (*a*) General Industrial Schools and courses for instruction in such subjects as may form a basal preparation for the trades, including workshop practice; (*b*) Special Industrial Schools and courses for instruction in the theoretical and practical work of particular trades: (*c*) Technical High Schools and High School courses; (*d*) Part-time Co-operative Industrial courses in which apprentices employed in the workshops may receive instruction bearing upon their trades; (*e*) Schools and Courses for instruction in the Fine and Applied Arts. (2) Night Schools, in which workmen and workwomen employed during the day may receive theoretical and practical instruction in their trades or callings.

Since the Act came into operation schools of all the types provided for have been organized.

Progress in Developing Day Industrial and Technical Schools

Day Industrial schools have been established in Brantford, Hamilton, London, and Toronto with both general and special courses of study. Technical depart-

ments are established in connection with the schools at Haileybury, Sudbury, and Sault Ste. Marie. Day schools for instruction in applied art are connected with the Technical Schools at Hamilton and Toronto.

In the general industrial courses of the day schools about 50 per cent. of the time is given to practical industrial work and 50 per cent. to the academic subjects. The academic subjects provide for a training in English, industrial history and geography, and in the mathematics, science, and drawing fundamental to the industries.

There has been a general extension of the practical work for boys. In the beginning it was confined mainly to woodwork. Forge shop practice, machine shop practice, printing, plumbing, automobile construction and operation, sheet metal work, etc., have been added.

The practical subjects for girls include both the industrial subjects by which girls purpose to earn their own living and also the subjects which are connected with the activities of the home. In the beginning these subjects were mainly cookery and sewing, but they are being extended to include catering, home and trade dressmaking, millinery, home nursing, home economics, power machine operation, etc.

Progress in Developing Technical Departments of High Schools

High Schools were organized in the beginning to prepare students for entrance to the Universities and the professional schools, and the courses of study are still largely controlled by the entrance requirements of the Universities and the Normal Schools. Long ago it became manifest that the needs of the students who are not preparing for the professions could not be met fully by the fixed courses of study prescribed for matriculation. The first attempt to adapt the courses to meet the requirements of such students was through the establishing of commercial departments in the High Schools. The success of these departments has amply justified their existence.

Now there is evidently a corresponding demand for special technical classes. Take for example the case of Haileybury. Principal Wilson reported in 1914 that since the opening of the High School in 1910 he had enrolled 104 boys, and of these only two had completed University matriculation, while 68 had left the school to become directly associated with the mining industry and 24 others had taken up some commercial occupation directly connected with the same industry. It would appear from this statement that the need of a large majority of the boys in this town is for a specialized training rather than for the prescribed High School course. The mining department of the High School was organized to meet this need. A corresponding need in Sudbury had previously led to the establishment of the mining department of the High School in that town. The technical department of the Sault Ste. Marie High School was organized to provide special training for the young men who enter the steel industry of that city.

The mining departments of the schools at Haileybury and Sudbury have been placed this year on a much more satisfactory basis. Additional accommodation is being provided for laboratory work and assaying at Sudbury and an additional teacher has been appointed; a new building is being erected in Haileybury to provide for a stamp mill and laboratory and class-room accommodation; an additional teacher will be appointed in this school also as soon as the building is completed. Practical courses of study, distinct almost completely from the ordinary High School courses, are adopted in both schools. A decided impetus has been given

to the work by the recognition that these courses have received from Queen's University. Students who have completed the course either at Haileybury or Sudbury are admitted to standing in the School of Mining without examination.

Progress in Developing Part-Time Courses

Part-time co-operative classes for men engaged in the printing and plumbing trades, and for women who are house workers have been in operation for several years in the Toronto Technical School. The most important advance in the Province in the organization of the part-time system was made this year by the Technical School at Hamilton. Principal Sprague, who has devoted a great deal of energy to outside organization work among the industries of the city, has succeeded in inducing the managements of eighteen different firms, covering most of the important industries of the city, to enter into a plan of co-operation with the school in accordance with which their apprentices are allowed to attend the school one-half day a week and are paid for the time spent in the school. The instruction given is related to the needs of the apprentices in their trade work and, therefore, increases their efficiency as workers; hence both apprentices and employers profit by the scheme.

Progress in Developing Night Schools

The night industrial and technical schools have found a permanent place in the educational system of the Province. The schools which were first to be established, such as those at Brantford, Brockville, Hamilton, London, Stratford, and Windsor, have not only maintained their positions, but have been growing in usefulness from year to year. The demand for new schools continues. Schools were opened this year at Arnprior, Cobourg, Chatham, Newmarket, Parry Sound, St. Catharines, Thorold, and Welland.

In recent visits to schools in the United States I was struck by the increasing importance given to night class work. Those directing industrial education have come to recognize that the night schools furnish the only satisfactory means for the educational improvement of adults who are employed during the day. Part-time systems may apply to boys and girls from fourteen to sixteen years and to apprentices from sixteen to twenty, but the night schools open avenues for advancement to men and women at every stage.

Our schools provide a very wide range of work in practically all departments of industrial and technical instruction. In fact, any course of instruction for which there is a demand will be supplied by the local advisory industrial committees controlling the schools. A full list of the subjects taught will be found in the statistical tables at the end of this report. It will be observed that the most common subjects demanded by men are, architectural drawing, machine drawing, the reading of blue prints, shop mathematics, and shop practice in the various trades; women apply mostly for cooking, sewing and home dressmaking and millinery.

The Effects of the War on the Progress of Industrial and Technical Schools

The principals of all the schools report that the attendance of pupils would have been very much larger had it not been for war conditions. The effects are especially noticeable in night class attendance, because, as one would expect, those who have the determination to succeed by improving their educational attainments by taking advantage of night class instruction are among the first to enlist for

overseas service. Classes were discontinued in two of the larger industrial centres, because practically all the students had enlisted, and in three of the smaller centres, because the purposes for which the classes were established had been fulfilled. The war also has retarded the establishment of new schools. The boards of several towns report that they are prepared to consider organization when the war is over.

Considering the depressing effect of the war the general progress throughout the Province is the more remarkable. This is accounted for in part by the attendance of a large number of those engaged as munition workers, who come to the classes for special instruction directly in the line of the work in which they are engaged, and in part by the larger attendance of women, and of youths who have not reached the military age.

The Problems of the Future

We have acquired through our own experiments and those in other countries a fund of information regarding vocational educational needs and the best means of organizing to meet those needs. In some respects this is the most valuable result of our five years' experience, because it has furnished us with some very clearly defined problems for the future and has given us suggestions for the solution of these problems.

The Necessity for Conserving Human Resources

Most of these problems centre in or are in some way connected with the determination of means for developing and conserving the human resources of the country. Whenever men of affairs meet to consider the industrial problems that the pressure of times is forcing on the attention of the people, the emphasis in discussions is being placed on the necessity of conserving the human power of the nation as the only means of making the most of our natural resources. *"The war has agitated every British country to its foundations. It has caused a searching of heart which the world has not known before in modern times. Among the most remarkable of its results has been the re-examination which each nation has been compelled to make with regard to its material resources. The gospel which we have been preaching for some years past has now been found to be the true gospel. It has been found by hard experience *that national safety demands that the nation should not only possess resources but understand them and be able to utilize them economically.* Whereas, a few years ago people listened to the discussion of this subject with polite but somewhat academic interest, they now know that no subject is of more importance to the national well-being and that *the lack of developed capacity to utilize every possible resource may in certain emergencies mean disaster.* Therefore, though it be a time of war when thoughts of war and matters relating directly to its conduct occupy people's minds almost exclusively, yet it has become clear that our work is of the most far-reaching importance. Every consideration points to vigorous and aggressive action rather than to postponement or delay."

I have quoted the foregoing because it is a forceful and clear expression of the present day attitude of our industrial leaders. The sections that I have taken the liberty of having printed in italics suggest the fundamental relation of material to personal resources; the one is conserved by the development of the other. To save our heritage in material things we must develop the ability to "sell more brains and less material."

*From the address of Sir Clifford Sifton, Chairman of the Commission of Conservation, at the Eighth Annual Meeting of the Commission.

But the conservation of human power is, at root, an educational problem. Any improvement in the present working force can be brought about only through training. The resources of the future are to be found in the development to the fullest of the capacities for service latent in our youth.

Losses in Human Resources

One of the results of our experience in industrial education has been to give some appreciation of the wastage resulting from an imperfect utilization of these capacities. No accurate calculation has been made of the total of this wastage. We have estimated with a fair degree of accuracy our losses from partial and imperfect cultivation of our lands; these have been calculated in terms of bushels of grain and tons of meat and dairy products; but the problem of summing up the immensity of our losses through failures to obtain the highest economic values from the cultivation of the talents in skill, in mental resourcefulness, and determination of purpose in our children has never been solved. An exact solution of this problem, possibly, cannot be found, because some of the factors involved are not measured by physical standard. But our experiences are giving us an insight into the nature of these losses and the stages at which they occur.

The study of the attainments of part-time and night school pupils, and the results of vocational and industrial surveys point to two outstanding sources of loss.

(1) The loss which results from the failure of children to become equipped with a full common school education.

(2) The loss which results from the failure of the youth to obtain an adequate vocational equipment for a life career in some useful trade or calling.

Each of these sources of loss should be seriously investigated.

Losses from Lack of Common School Training

The minimum equipment in general education for boys and girls has never been standardized. Our present ideas are fairly well summed up in the requirements of the first four forms of the Public School Course of Study. This educational standard at least is not too high as a foundation for citizenship. Certainly those who fail to complete such a course find themselves seriously handicapped in any field of work offering opportunities for advancement.

What percentage of Ontario children reach this standard? What is the educational status of those who fail to complete a full Public School course? These are questions which we should take steps to answer with a fair degree of accuracy; if the losses at this stage are as great as they appear to be we should determine the causes and find means to prevent them.

Losses from Waste of Labour

But the investigation should not stop with the determination of the educational status of those who leave school at the limit of compulsory attendance. What becomes of these children? Our experiences in connection with industrial education seem to point to the fact that a very large number of this class find their way into occupations that have but little promise for the future. The serious aspects of this question are set forth in a recent report of a British Royal Commission. After pointing out the tendency of the youth to enter "blind alley" occupations the report goes on to say, "We cannot believe that the nation can long persist in ignoring the fact that the unemployed, and particularly the under-employed and unemployable, are thus being daily created under our eyes out of bright young lives capable of better things, for whose training we make no provision. It is, unfortunately, only too clear that the mass of unemployment is continually being recruited by a stream of young men from industries which rely upon unskilled boy

labour, and turn it adrift at manhood without any general or special industrial qualification, and that it will never be diminished till this stream is arrested."

Now, this process of the transformation of school boys into unskilled workers, described in this report, is going on in Ontario. What is the extent of the wastage from this source? What can be done to prevent it? What are the causes? These questions involve both educational and economic problems that are being discussed very widely in other countries.

The facts in the premises are being summarized somewhat as follows:

(1) One of the chief results of systematic child study investigations has been to show the opportunities and the necessities for training the child during adolescence, and to point out the evil effects, both to the child and to society, of educational neglect during this period.

(2) Manifestly the child of fourteen is not capable of choosing intelligently a vocation, because he lacks that knowledge and appreciation of values in himself and in the world's activities that would fit him to choose wisely his life work.

(3) Moreover, very few forms of employment that promise to be satisfactory life vocations are open to children younger than sixteen years of age. The skilled trades have no place for learners under that age, and the age for admission to professional schools is usually higher. Consequently, the children between fourteen and sixteen years of age who are at work are engaged in "dead end" occupations. An investigation of the United States Bureau of Labour showed that of a certain number of children under sixteen years who left school for work, ninety per cent. entered industries in which the wages of adults were $10.00 a week or less.

Now, if the child between fourteen and sixteen years is at the most critical stages of his life and needs guidance, control, and training, if he has not sufficient maturity to choose wisely a vocation, if industry has no permanent place to offer him, what shall we do with him? When shall we allow him to leave school? What kind of training shall we give him? When shall we allow him to go to work?

Necessity for Extending Period of Education

The only solution of the problem involved in finding answers to these questions appears to be in the extension of the period of education of the child from fourteen to sixteen years or even beyond this limit.

The fundamental necessity of extending the period of the education of the youth is becoming recognized by the English-speaking nations. Opinion in Great Britain is fairly expressed in the following paragraph taken from an editorial in the London *Times* in which the work of committees to provide for educational reconstruction is discussed: "How far we are from the ideal at present is shown by the fact that of the two and three-quarter million English children between the ages of twelve and sixteen only 1,100,000 get any further education after the age of thirteen. No change in the curriculum is going to make good citizens of the remaining 1,650,000 to whom no curriculum is applied. To alter these figures is the main task of the committees which are being set up. There are many other necessary reforms and lines of development; but all are subsidiary to this, and all are blocked until this obstacle is removed."

But the experiments would appear to show that the extension of the school term will be effective in a large way in improving conditions only when each of the three following conditions is fulfilled:

(1) That additional facilities be provided through full-time or part-time day schools for children beyond fourteen years of age in which vocational training with an industrial bias in urban centres and an agricultural bias in rural centres is made an essential part.

(2) That attendance at part-time or full-time day schools be made compulsory for all children between fourteen and sixteen years of age.

(3) That in the larger urban centres agencies be established to assist parents and pupils in selecting suitable vocations and courses of training.

The reasons for demanding these conditions are not theoretical; they are based on experience; this is shown by the following considerations.

Necessity for Vocational Day Schools

There is no gap between the Public Schools and professional or commercial life, because the High Schools lead directly to the University, the professional schools, and positions with business concerns, and a sufficient number, probably too many, are being led in these directions; but a real chasm exists between the Public Schools and positions with promise in industrial activities, where the needs for skilled labour are great. The vocational day school has proved to be the only satisfactory means of bridging this chasm.

Necessity for Compulsory Attendance

Experiences show that even where suitable buildings, adequate equipment, and well-trained teachers are employed and where the courses of study are made vocational in character, the problem of securing the attendance of the children who have been in the habit of leaving school at fourteen years of age still requires to be solved.

When the movement for vocational education began to gain strength about five years ago vocational schools were established at many of the industrial centres in the Eastern and Middle States. The attendance at such schools has, on the whole, been fair, but their organization has appreciably diminished the outflow of children at fourteen years of age from schools only in centres where compulsory continuation school laws have been brought into operation.

Although Toronto has provided ample accommodation in the Collegiate Institutes, the High School of Commerce, and in the Technical School, and the best equipment available has been provided, yet, if we are to judge by the experience of other cities where compulsory part-time schools are in operation, the chances are that if the *Adolescent School Attendance Act* were put into operation at once and effectively enforced, from five to ten thousand children who need training would be brought into the schools.

It is evident that some form of compulsion, either part-time or full-time, is necessary to meet the situation: but the opinions of men who have studied the problem from both educational and economic standpoints, appear to be fairly divided between the support of part-time schools and demands for raising the age limit for all pupils for full day attendance up to a higher level. Those who favour the part-time plan are fairly well agreed that to secure effective educational results at least one-half of the working time of the pupils should be devoted to attendance at a day school, but many go so far as to say that the part-time compulsory school should be regarded only as a temporary expedient. They contend that the time spent by the child between fourteen and sixteen years in industry is, on the whole, a loss to industry, and also, in most cases, a loss to the child.

Necessity for Vocational Guidance

The selecting of a vocation is becoming increasingly more perplexing to young people and their parents, and the need for some available form of assistance is urgent, especially in large industrial communities. Intelligent choice can be based only on a knowledge of the materials of choice. The youth, therefore, must learn something of trades and professions, their character and social value, their oppor-

tunities, qualifications for admission, restrictions placed by labour unions or professional bodies, time and expense involved in preparation, permanency, healthfulness, safety, remuneration, etc.

But the opportunities for study are, under modern conditions, unfavourable. The occupations of our country in the earlier days were relatively few and simple, and were free to the inspection of all. The blacksmith, the weaver, and the shoemaker welcomed a chat with the school boy. To-day the magnitude and complexity of industrial organizations and the minuteness of specialization in operations would bewilder the youth, even if he had opportunities for observation, but these are denied, for the "No Admission" signs are posted everywhere.

Parents naturally look to teachers for advice, but it is not reasonable to expect the school to be completely responsible for the vocational guidance of the youth. Teachers should be competent to give general instruction on the industries of the country and the activities of the people, but they cannot be expected to have an intimate knowledge of the details of employments in our highly organized factory systems and business concerns; nor can they be expected to be familiar with industrial statistics, labour conditions, and the hundred and one other problems of interest to young people preparing to enter upon their life work. Moreover, many of our teachers are young men or, more frequently, young women, just entering on their callings, and, therefore, lacking in that knowledge of life and sympathetic insight into human nature necessary to wise counsellors of the young.

It is evident that, as in the case of medical inspection, a specialized service is necessary for the maintenance of any adequate system of vocational guidance. In fact, a department of vocational guidance is the logical completion of the idea expressed in the department of medical inspection. The office of the one department is to conserve the life of the community; that of the other, to direct it into useful channels of service.

Obstacles in Way of Advancement. Need for Federal Support

Now, what stands in the way of fulfilling the conditions that have been described, and of carrying out a comprehensive scheme which will provide for the vocational education of all who have need of it? The main obstacle is lack of funds. It is useless to pass a compulsory attendance law unless school boards are prepared to provide the accommodation, equipment, and teachers necessary to take charge of the children brought into the schools by its enforcement. Local school tax rates are, as a rule, high, and boards are not inclined to undertake large expenditures. They have, as I have pointed out, been liberal in joining with the Department of Education in supporting night class instruction, because no large outlays are demanded for buildings and equipment, and the returns are immediate, but the erection and equipment of special buildings for day schools is another matter, and the people are naturally looking for support for work which they do not regard as purely local.

The claims of the Province for Dominion support for industrial and technical education have been set forth on many occasions by the Minister of Education and it is unnecessary to repeat the arguments here.

The Situation in the United States

But it may be pointed out that the situation is not one met in Canada alone. In the United States it is being found that the State unit is too narrow to assume the responsibility for the support of schools which in a very peculiar sense are for the benefit of the nation at large. Appeals are being made for national support for vocational education. The Smith-Hughes Bill, which provides very liberally

for the training of vocational teachers and the support of vocational schools, is now before Congress. The bill is receiving very general support and it is said to be certain to pass.* The arguments used in support of this bill are of interest to us not only because conditions in Canada and the United States are somewhat similar, but especially because they show the trend of thought and action in the country which, in many respects, must always be our chief competitor in the world's markets. The following are the arguments in support of the bill as formulated in short form by the Commission on National Aid to Vocational Education:

National Grants are Needed.

1. *To make the work of vocational training possible* in those States and localities already burdened with the task of meeting the requirements for general education.

2. *To help the States* with their widely varying resources bear the burden of giving vocational education as a national service.

3. *To equalize among the States the task of preparing workers* whose tendency to remove from place to place is increasing, making their training for a life work a national as well as a State duty and problem.

4. *To secure national assistance* in solving a problem too large to be worked out extensively and permanently save by the whole nation.

5. *To secure expert information* from the agencies of the National Government, bringing to bear a country-wide knowledge and viewpoint, which will put the work of the States on a scientific and businesslike basis.

National Grants are Justified.

1. *By the interstate character of the problem* of vocational education, due to the interstate character of our industries and the national character of State business and industrial life.

2. *By the national character of the problem,* for it concerns all the people and is of nation-wide interest and importance.

3. *By the urgency of the case.* The problem is pressing. The opportunity for highly skilled labour in all its forms was never what it is to-day. The nations of the world reach out to the United States and we to them. Our ability to seize this opportunity depends in large measure upon an abundant supply of highly skilled artisans in every line. The urgency is such that the States and cities cannot meet it if they would. The Nation must help if it is to be done in time.

Provisions for Vocational Education of Returned Soldiers

By an Act of the Legislature, the Soldiers' Aid Commission of Ontario was empowered to provide specially for the vocational education of returned disabled soldiers. The Commission has appointed Mr. W. W. Nichol as Vocational Officer to take charge of this department of vocational education. He is working in harmony with the Dominion Military Hospitals Commission and the Ontario Department of Education. He is studying the needs of the men in the military convalescent hospitals and is making provision to meet these needs either through individual or class instruction in the hospitals themselves or through attendance at classes in commercial, technical, or other schools already established.

Roughly, the work undertaken may be classified under the following heads:

(1) Education in elementary and commercial subjects and light shop work in wood or metal undertaken by convalescents primarily for therapeutic reasons.

(2) Education for convalescent patients for improvement in academic, commercial and industrial branches.

*Since this Report was written the Smith-Hughes Bill has been passed by Congress without a dissenting vote.

(3) Re-education for soldiers so disabled by their military service that they cannot return to their former vocations. Such men are given training for new occupations suited to their condition and capacity.

Classes have been established in connection with the convalescent hospitals in Toronto, Hamilton, London, and Ottawa, and are being organized in Kingston. Other classes will be provided in the same centres or in other centres as needed.

The classes established in connection with the hospitals in Toronto provide for instruction in commercial subjects, civil service preparation, telegraphy, railroad standard train rules and traffic orders, carpentry, joinery, cabinet making, and general woodworking. Arrangements have been made with the Technical School by which returned soldiers are taking courses in the Toronto Technical School in motor mechanics, machine shop practice, electricity, mechanical drawing, printing, plumbing, industrial design, and painting and decorating.

In Hamilton, elementary and commercial instruction is given in a class room in the convalescent hospital, and soldiers attend the Hamilton Technical School for instruction in mechanical drawing, machine shop practice, workshop mathematics, and electricity.

In London, classes are formed in the convalescent hospital for instruction in elementary and commercial subjects, civil service preparation, telegraphy, woodworking, and cabinet making, and soldiers attend the London Industrial School for instruction in machine shop practice, mechanical drawing, electricity, industrial design, and trade carpentry.

In Ottawa, all instruction is given in the hospital. Classes are provided in elementary subjects, woodworking, carpentry and joinery, mechanical drawing, auto mechanics, and in arts and crafts.

At the end of January, 1917, there were 554 returned soldiers enrolled in the various vocational classes in military convalescent hospitals throughout the Province.

Statistical Tables

The appended tables give information regarding subjects of study and attendance in day and night Industrial and Technical Schools for the current academic year.

I have the honour to be, Sir,

Your obedient servant,

Toronto, February 17th, 1917. F. W. MERCHANT.

TABLE I—ATTENDANCE AND COURSE OF STUDY—INDUSTRIAL AND TECHNICAL DAY SCHOOLS

Schools	General Industrial Classes	Special Industrial Classes	Technical High School Classes	Co-operative Industrial Classes	Classes in Fine and Applied Arts
Brantford Industrial School	9				
Haileybury, Mining Department of High School			23		
Hamilton, Technical and Art School	95	122	14	73	40
London, Industrial and Art School	64		46		
Sault Ste. Marie, Technical Department of High School				4	
Sudbury, Mining Department of High School			23		
Toronto, Technical and Art School	446	859	337	41	161
Totals	614	981	443	118	201

TABLE II—ATTENDANCE AND SUBJECTS OF STUDY—NIGHT

Schools	Applied Mechanics	Art and Design	Architectural Drawing	Freehand Drawing	Mechanical Drawing and Machine Design	Perspective Drawing	Building Construction and Carpentry	Cabinet Making	Chemistry	Clay Modelling	Cooking	Electricity	Electroplating	Embroidery	English	Estimating	Machine Shop	Forge Shop	Gasoline Engine and Auto Management.
1 Arnprior	..	...	....	....	....	..	....	..	....	..	....	....	..	...	....	...	....	..	....
2 Brantford	..	14	9	....	21	..	....	..	....	..	80	25	..	...	58	...	12	10	25
3 Brockville	..	...	....	19	10	..	....	..	9	..	28	....	..	...	14	...	...	..	....
4 Chatham	..	...	10	....	8	..	....	..	...	..	....	....	..	...	99	...	...	..	59
5 Cobourg	..	...	....	....	....	..	....	..	....	..	....	....	..	...	10	...	...	..	....
6 Collingwood	..	...	....	....	21	..	....	..	....	..	13	....	..	...	....	...	...	..	....
7 Cornwall	..	...	....	....	13	..	....	..	....	..	44	5	..	...	53	...	...	..	....
8 Dundas	..	...	....	....	15	..	....	..	....	..	18	9	..	...	35	...	...	..	....
9 Fort William	..	17	....	....	12	..	....	..	10	..	18	22	..	...	17	...	...	..	....
10 Galt	..	...	....	....	26	..	....	..	....	..	9	6	..	...	....	...	...	..	....
11 Goderich	..	...	....	....	....	..	....	..	....	..	53	....	..	...	....	...	...	..	....
12 Guelph	..	...	....	....	12	10	13	..	....	..	17	9	..	...	21	...	16	..	71
13 Hamilton	..	5	25	47	336	14	....	..	....	7	90	119	..	...	....	...	125	..	....
14 Ingersoll	..	...	....	....	12	..	....	..	....	..	....	....	..	...	....	...	...	..	....
15 Kitchener	..	...	16	16	16	..	....	..	8	11	64	8	..	...	27	...	...	..	....
16 London	..	34	15	....	82	..	52	63	....	..	52	38	..	95	100	22	96	..	....
17 Newmarket	..	...	....	....	11	..	....	..	....	..	....	....	..	...	12	...	...	..	....
18 Niagara Falls	..	...	17	....	40	..	....	..	....	..	61	52	..	...	....	...	...	..	....
19 Ottawa	..	...	11	13	37	3	....	..	16	..	461	15	..	...	188	...	...	..	63
20 Owen Sound	..	...	....	....	16	..	....	..	....	..	47	....	..	...	....	...	...	..	....
21 Parry Sound	..	...	....	....	9	..	....	..	....	..	....	....	..	...	55	...	...	..	....
22 Pembroke	..	...	....	....	8	..	12	..	....	..	....	....	..	...	28	...	...	..	....
23 Peterborough	..	...	....	....	24	..	....	..	....	..	58	20	..	...	....	...	...	..	....
24 Renfrew	..	9	....	....	18	..	....	..	....	..	....	....	..	...	....	...	...	..	....
25 Sault Ste. Marie	..	...	....	....	17	..	....	..	....	..	65	9	..	...	120	...	...	..	....
26 St. Catharines	..	...	....	....	83	..	....	..	....	..	....	56	..	...	38	...	...	..	....
27 Stratford	..	...	....	....	34	..	....	..	27	..	62	45	..	...	30	...	...	..	....
28 Thorold	..	...	....	....	18	..	....	..	49	..	....	35	..	...	26	...	...	..	....
Toronto—																			
29 Central	21	...	141	149	150	..	42	..	130	37	1123	297	16	68	626	18	96	..	243
30 Humberside	..	...	5	....	11	..	....	..	....	..	41	....	..	...	....	...	...	..	....
31 Oakwood	..	...	....	....	....	..	....	..	....	..	27	....	..	...	....	...	...	..	....
32 Riverdale	..	...	10	14	8	..	....	..	....	..	107	27	..	...	22	...	...	..	....
33 Welland	..	...	....	....	8	..	....	..	....	..	....	11	..	...	10	...	...	..	....
34 Whitby	..	...	....	....	....	..	11	..	....	..	....	16	..	...	....	...	...	..	....
35 Windsor	..	...	7	....	23	..	....	..	....	..	99	25	..	...	35	...	...	..	70
36 Woodstock	..	...	....	....	14	..	....	23	....	..	23	....	..	...	....	...	26	..	....
Totals	21	79	266	258	1113	27	130	86	249	55	2660	849	16	163	1624	40	371	10	531

INDUSTRIAL AND TECHNICAL CLASSES

	Home Economics	Home Nursing and First Aid	Hygiene	Industrial Design	Lace Making	Mathematics	Millinery	Pattern-making	Printing	Physical Culture	Plumbing	Sewing and Dressmaking	Art Needlework	Sheet Metal Work	Steam Engine	Strength of Materials	Surveying	Woodworking (General)	Woodcarving	Sign Writing	Accounting	Physics	China Painting
1	....	....	....	....	....	....	....	..	....	....	....	31	....	..	..	..	..	....	..	..	....	....	..
2	....	....	....	....	....	67	50	..	....	....	....	40	....	..	..	..	..	32	..	..	....	....	..
3	....	....	....	....	....	14	50	..	....	12	....	34	....	..	..	..	..	24	..	..	....	15	..
4	....	....	....	....	....	101	38	..	....	....	....	65	....	..	..	..	..	12	..	..	....	....	..
5	....	....	....	....	....	10	25	..	....	16	....	50	....	..	..	..	..	....	..	..	....	....	..
6	....	....	....	....	....	....	9	..	....	....	....	9	....	..	..	..	..	....	..	..	....	....	..
7	....	....	....	....	....	13	....	..	....	....	....	50	....	..	..	..	..	....	..	..	....	....	..
8	....	....	....	....	....	59	....	..	....	....	....	26	....	..	..	..	..	....	..	..	....	....	..
9	....	....	....	....	....	17	12	..	....	....	....	36	....	..	..	..	..	12	..	..	....	....	..
10	....	....	....	....	....	20	8	..	....	....	....	87	....	..	..	..	..	14	..	..	....	....	..
11	....	....	....	....	....	....	51	..	....	....	....	60	....	..	..	..	..	....	..	..	....	....	..
12	....	48	....	....	....	....	34	..	....	....	....	53	....	..	..	..	..	27	..	14	....	....	..
13	....	....	....	....	....	230	80	19	35	....	17	120	....	..	..	..	..	46	4	..	....	....	11
14	....	....	....	....	....	12	13	..	....	....	....	19	....	..	..	..	..	....	16	..	....	....	..
15	....	....	....	....	....	27	....	..	....	....	....	66	....	..	..	..	..	....	..	..	....	....	..
16	52	71	....	....	....	21	50	..	....	....	18	157	....	9	..	..	..	....	27	19	....	....	..
17	....	....	....	....	....	15	16	..	....	....	....	39	....	..	..	..	..	....	..	..	....	....	..
18	....	....	....	....	....	....	17	..	....	....	....	31	....	..	..	..	..	....	..	..	....	....	..
19	....	....	....	5	....	33	194	..	....	....	....	287	....	..	..	..	..	53	..	..	....	....	..
20	....	....	....	....	....	27	13	..	....	....	....	54	....	..	..	..	..	32	..	..	....	....	..
21	....	18	....	....	....	25	....	..	....	....	....	40	....	..	..	..	..	....	..	..	10	....	..
22	....	....	....	....	....	12	45	..	....	....	....	63	....	..	..	..	..	....	..	..	....	....	..
23	....	....	....	....	....	44	15	..	....	....	....	56	....	..	..	..	..	....	..	..	....	....	..
24	....	....	....	....	....	8	14	..	....	36	....	62	....	..	..	..	..	....	..	..	....	....	..
25	....	....	....	....	....	106	48	..	....	....	....	75	....	..	..	..	..	....	..	..	....	....	..
26	....	....	....	....	....	77	....	..	....	....	....	....	....	..	..	..	..	....	..	..	....	....	..
27	....	....	....	....	....	93	27	..	....	....	....	82	....	..	..	..	..	....	..	..	....	....	..
28	....	....	....	....	....	28	....	..	....	....	....	....	....	..	..	..	..	....	..	..	....	....	..
29	70	350	24	102	30	648	302	..	87	643	43	516	....	..	44	21	15	38	19	30	....	20	..
30	....	....	....	....	....	....	17	..	....	....	....	18	....	..	..	..	..	....	..	..	....	....	..
31	....	....	....	....	....	43	22	..	....	....	....	40	....	..	..	..	..	....	..	..	....	....	..
32	....	....	....	....	....	56	37	..	....	....	....	89	....	..	..	..	..	....	..	..	....	....	..
33	....	....	....	....	....	13	....	..	....	....	....	....	....	..	..	..	..	....	..	..	....	....	..
34	....	....	....	....	....	10	....	..	....	....	....	15	....	..	..	..	..	....	..	..	....	....	..
35	....	....	....	....	....	63	12	..	....	....	7	111	7	..	..	..	..	10	..	..	....	21	..
36	....	....	....	....	....	24	9	..	....	....	....	19	....	..	..	..	..	....	..	..	....	....	..
	122	487	24	107	30	1916	1208	19	122	707	85	2500	7	9	44	21	15	300	66	63	10	56	11

TABLE II—ATTENDANCE AND SUBJECTS OF STUDY—NIGHT INDUSTRIAL AND TECHNICAL CLASSES—Concluded

Schools	Drawing from Antique	Lettering	Life Drawing	Commercial Subjects	Dietetics	Charcoal Drawing	Voice Culture	Mineralogy and Geology	Photography	French	Power Sewing Machine Operation	Designing and Cutting	Telegraphy	Pottery	Naval Architecture
1 Arnprior	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2 Brantford	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3 Brockville	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4 Chatham	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5 Cobourg	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
6 Collingwood	....	....	....	....	....	....	....	....	....	....	....	....	....	....	29
7 Cornwall	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8 Dundas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
9 Fort William	....	....	....	30	....	....	....	10	....	....	....	....	....	....	....
10 Galt	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11 Goderich	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
12 Guelph	....	....	....	....	....	....	....	....	....	....	....	....	16	....	....
13 Hamilton	43	14	10	3	....	....	....	....	....	....	....	....	....	....	....
14 Ingersoll	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15 Kitchener	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
16 London	....	....	10	....	....	34	....	....	....	....	....	....	....	....	....
17 Newmarket	....	....	....	18	....	....	....	....	....	....	....	....	....	....	....
18 Niagara Falls	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
19 Ottawa	....	8	....	....	....	5	....	....	....	....	....	....	....	....	....
20 Owen Sound	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
21 Parry Sound	....	....	....	20	....	....	....	....	....	....	....	....	....	....	....
22 Pembroke	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
23 Peterborough	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
24 Renfrew	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
25 Sault Ste. Marie	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
26 St. Catharines	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
27 Stratford	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
28 Thorold	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Toronto—															
29 Central	58	47	44	....	45	....	309	16	45	274	68	81	....	25	....
30 Humberside	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
31 Oakwood	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
32 Riverdale	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
33 Welland	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
34 Whitby	....	....	....	30	....	....	....	....	....	....	....	....	....	....	....
35 Windsor	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
36 Woodstock	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Totals	101	69	64	101	45	39	309	26	45	274	68	81	16	25	29

APPENDIX E

REPORT OF THE INSPECTOR OF ELEMENTARY AGRICULTURAL CLASSES

To the Honourable R. A. Pyne, M.D., LL.D.,

Minister of Education for Ontario.

Sir,—I beg to submit for your consideration a report on Elementary Agricultural Classes in connection with the schools of the Province for the year 1916.

I have the honour to be, Sir,

Your obedient servant,

J. B. Dandeno,

Inspector of Elementary Agricultural Classes.

January, 1917.

The duties of the Inspector of Elementary Agricultural Classes include: (1) The inspection of Agricultural classes in Collegiate Institutes, High Schools, Continuation Schools and in Normal Schools; (2) a general supervision of the teaching of Agriculture in the Public and Separate Schools including the approving of teachers' reports and trustees' statements; (3) attendance upon Teachers' Institutes and taking part in the programmes as frequently as possible; (4) visiting Secondary Schools which have not yet introduced classes in Agriculture to discuss the situation; (5) addressing public meetings, such as township institutes, county trustees' associations, county councils and the like with the object of explaining the situation with respect to the teaching of Agriculture in the schools; (6) a supervision of the Summer Courses for teachers at the Ontario Agricultural College.

Rural Schools

Agriculture as a subject for study in the primary schools of Ontario is not entirely new, at least in so far as its existence on the school programme is concerned. The need for such a subject was realized many years ago, and from time to time spasmodic efforts have been made to graft it somehow into the course of study. The movement in behalf of Nature Study was one branch of the main idea, and, while this subject has a place of its own, there is no doubt that its influence, not only upon subject matter, but also upon methods of teaching, has had considerable influence in favour of the introduction of Agriculture.

Book study and "tongue teaching" (telling, preaching at) for generations have wielded a tremendous influence towards shaping our views with reference, not only to methods employed in the education of the young, but also to the body of matter used as the chief part of the machinery of education. Old methods are difficult to uproot. Inherited prejudices die hard. To the great majority scholastic education is a thing apart from the occupations of the families concerned, and it is difficult to convince people that the only education really worth while in developing the individual on a sound basis is one in which the occupations of the individual are used in connection with the scholastic study.

The Ontario system of education has definite set programmes with well defined steps of advancement for the individual, with well arranged examinations and with clear-cut scholastic values. These values have become, through a long period of time, standardized so that they are regarded as being of commercial value or of money value. Farmers and others have grown up with this idea and they are slow to make any change in what they understand for that which is an innovation.

The influences created by the introduction of Nature Study, the different viewpoint brought about by the laboratory method in Science, the changed attitude of the younger generation towards material progress, have all made the introduction of any new subjects, especially those dealing with material things, much more easy of accomplishment. But one of the most important factors, perhaps the chief factor, in bringing about the actual introduction of Agriculture into both Primary and Secondary schools was the appropriation of a portion of the Federal funds to be used in promoting Agricultural Education.

This money which is administered by the Department of Education is used in various ways. But the chief object kept always in mind is, that the best results will be obtained by using the money to bring about directly the actual teaching of the subject in the schools. To accomplish this a part of the money is used in the training of the teacher, another part in payment for actual equipment to be used for instruction, another for the work of special inspection, and still another to boards and teachers for managing school gardens. The clause of the agreement between the Federal Government and the Province relating to the money set apart to be administered by the Department of Education reads as follows:

"To encourage Agriculture, Manual Training as applied to work on the farm and Domestic Science in High, Public, Separate and Continuation Schools and in Universities to be available for grants and for travelling and living expenses of teachers and others in attendance at Short Courses or other educational gatherings, in addition to services, expenses, and equipment, and to be paid on the recommendation of the Department of Education, $26,000."

The regulations stating the conditions under which the classes in Elementary Agriculture and Horticulture are maintained, and the requirements for earning grants are set forth in the clauses taken from the Regulations:

Pages 83-85; 14, (1), (*a*), (*b*); (2), (3), (4), (5); 15, 16, (1), (2).

The sums apportioned to School Boards and teachers with the conditions under which they are payable, are shown in the following schedule:

Schedule of Grants

FORMS III, IV AND V

Requirements	Where, after 1915, the teacher holds a second class certificate but is not certificated in Agriculture				Where the teacher holds an Elementary certificate in Agriculture and Horticulture, or receives a certificate during the year			
	To the Board	To Teacher		To Trustees	To Teacher			
		For full year	For winter and spring terms	For fall term		For full year	For winter and spring terms	For fall term
A. First Plan								
Instruction.								
Instruction throughout the whole year, to be completed satisfactorily, with requirements regarding pupils' records, teacher's report, trustees' statement, etc., fulfilled.								
Home Gardens.								
Home gardens or projects by pupils of Forms III, IV, and V supervised by the teacher.	Up to but not exceeding $10.00	$15.00	$7.50	$5.25	Not exceeding $20.00	$30.00	$20.00	$12.00
School Grounds.								
Well kept grass and flower plots, borders, screens, etc., at school for beautifying grounds and for instructional purposes.								
B. Second Plan								
Instruction.								
Instruction throughout the whole year to be completed satisfactorily, with requirements regarding pupils' records, teacher's reports, trustees' statement, etc., fulfilled.								
School Gardens.								
(1) A pupils' school farm or school garden at or near the school, having at least six square rods for experimental and observation plots and contributing to the school Fair.	Up to but not exceeding $15.00	$20.00	$10.00	$8.00	Not exceeding $30.00	$40.00	$20.00	$16.00
(2) For other pupils of Forms III, IV, and V, not represented in the work on the six square rods, either additional plots in the school garden, or gardens or projects at home, supervised by the teacher.								
School Grounds.								
Well kept grass and flower plots, borders, screens, etc., for beautifying grounds and for instructional purposes.								

When the Teacher holds an Intermediate Certificate in Agriculture, the grant in addition to his salary shall be one-half more than that specified in the above schedule for the holder of an Elementary certificate.

The Public and Separate Schools qualifying for grants commencing in 1903 are given in the following table:

Year	No. of Schools	Year	No. of Schools	With School Gardens	With Home Gardens
1903.....	4	1910.....	17	.....	.....
1904.....	7	1911.....	33	.....	.....
1905.....	6	1912.....	101	.....	.....
1906.....	8	1913.....	159	.....	.....
1907.....	2	1914.....	264	208	56
1908.....	14	1915.....	407	222	185
1909.....	16	*1916.....	500	280	220

Up to 1914, no distinctions were made in the reports respecting Home Gardens and School Gardens.

Of these 407 schools teaching Agriculture in 1915, 100 were taught by teachers who held certificates in Agriculture and 307 were taught by teachers with Second Class certificates.

The amount paid out during the calendar year 1915 was:

To Public and Separate School Boards	$2,818.64
To teachers	6,560.88
	$9,379.52

This amount was made up partly from the Federal appropriation and partly from the Legislative grants as follows:

Amount paid to Boards and teachers from the Federal Appropriation	$4,963.03
Amount paid to Boards and teachers from the Legislative Grant	4,416.49
	$9,379.52

City Schools

There is no doubt that pupils in cities and towns would profit very materially by a course of study in Agriculture and Horticulture under a qualified teacher, providing suitable equipment were available, and providing the classes were instructed regularly throughout the year. But Agriculture as a subject of study can be taken to good advantage only by pupils old enough to understand not only the meaning but also the application of the principles involved. Such pupils will be found only in the upper classes of the Public Schools, that is in forms III, IV and V.

At present, in the larger cities, Household Science and Manual Training occupy a considerable portion of the pupil's time, consequently Agriculture could scarcely be added even though the conditions mentioned above were supplied. In such schools Agriculture is not likely to be introduced for some time yet, at least not with a curriculum so generously filled as is our present one. But for graded schools in smaller cities and towns there is no good reason why some classes in Agriculture should not be provided. For such schools, in forms III, IV and V, pro-

*Estimated from the notifications sent in. All the reports have not yet been received.

vision could be made so that regular classes provided for by arrangement on the time-table could be taken and profitable instruction given according to the present regulations. But where more than one teacher gives instruction in Agriculture to the class which he has in charge, and the boards provide suitable equipment, grants should be available on a basis similar to that upon which the rural schools are now working.

A large proportion of the topics in the course on Nature Study for the Public and Separate Schools may really be included under the heading Agriculture. If the teacher is so disposed he can, within the limits of the present course of study, give an Agricultural trend to much of the work there indicated. Therefore it may properly be said that Agriculture, in one sense, is already provided for under the present regulations. But it must not be forgotten that pupils who are in the first and second book classes are too young to appreciate the most rudimentary of Agricultural problems. They are old enough, however, to profit by lessons in Nature Study concerning their experience of rural life. And Nature Study should be so adapted to the environment of the pupils as to appeal to the activities of the child. Bird study might well include the fowls of the poultry yard. Insect study need not ignore the pests of the garden nor the vermin which prey upon animals. Useful plants may be used in the study of flowers, fruits and leaves. In fact the more practical the study the better, and it is often at this stage of life that the boy or girl gains a viewpoint and that ideals are born. Therefore, though the subject may be called Nature Study it can have a vast Agricultural import and wield a powerful influence in shaping the views and ideals of the individual.

It is recommended that special consideration be given to graded schools where more than one qualified teacher carries on the work satisfactorily. Every teacher who is engaged in teaching a third, fourth or fifth book class and who fulfils the requirements respecting the teaching of Agriculture should receive a grant according to the present schedule. But no one should be allowed to teach this subject in a graded school who does not hold at least an Elementary certificate in Agriculture. The grant to the board should be made upon the same basis as that to rural schools, excepting that where there are more than three teachers engaged in conducting classes in Agriculture in one school not more than three times the grant which is now paid in a one-teacher school should be available.

Special Training of Teachers in Agriculture

By an arrangement between the Ontario Agricultural College and the Department of Education, a course of instruction in Elementary Agriculture suitable for teachers of Public and Separate schools has been provided. This course covers two consecutive summer sessions of five weeks each. An important part of this course is practical school garden work, conducted by teachers of the staff of the Horticultural Department of the College. A considerable amount of individual help and instruction can be given at odd times to suit the arrangement of the student's programme, and the work is adapted as far as possible to enable the teachers to become acquainted with the methods of conducting gardens in rural schools. The gardens of the Macdonald Consolidated schools are available for illustration and for practice in management by the teachers. This is an unusually fortunate condition, because the teachers have an opportunity to follow up a garden which was prepared in the spring and which was, during the summer session, in a flourishing condition.

As a rule flat cultivation is desirable for school gardens, but where the plots are so situated that rains may do damage by washing, it is advisable, as was the case at Guelph this year, to raise the "beds" above the general level of the walks. However, in grim irony, there was no need to prepare for washing as there was no rain to speak of during the five weeks' course. Dry seasons have to be met by farmers and it was shown that with proper management they can be successfully met. The results of the work were very encouraging. Dry farming was of necessity undertaken, and was capable of practical illustration.

The work of instruction is made as practical as possible with the object of having the teachers become acquainted with out-of-door methods of instruction. This has a double-edged effect in so far as it is healthful and practical.

Upon the satisfactory completion of this two-summer course the teacher is given an Interim Elementary certificate in Agriculture which legally qualifies to teach the subject in the primary schools. This Interim certificate may be made permanent after the teacher has taught this subject successfully for two years. Any person who is legally qualified to teach in any of the schools in the Ontario system may be admitted to the course leading to an Elementary Certificate.

Course of Study in Agriculture

The course of study is arranged by months with a programme of topics reasonably suitable for the different seasons. The work herein outlined is also set forth in blank form in the back of the teacher's register with space for record by the teacher of the subjects taught. The topics suggested are not intended to be taken as "cast iron." The teacher is expected to take into consideration the local conditions and to use his own judgment.

In accordance with the Regulations teachers are required to record regularly on the blank form provided for this purpose in order to qualify for grants. This report signed by the teacher and endorsed by the inspector is to be sent to the Department of Education at the close of the calendar year.

The work is to be made as practical as possible and the minimum amount of time to be given to class work is one hour per week. While it may be necessary occasionally to give some time to the work after school hours it is expected that the one hour per week shall have a place on the time-table.

JANUARY

Plant Studies—Investigation of district's forest-tree areas with maps and census—Trees represented in firewood and sawlogs—Arithmetical problems on lumber, sawlogs and woodpiles—Plans for conserving local forests, reforesting waste lands or establishing a school arboretum—Value of ashes and saving of same for garden.

Animal Studies—Breeds of farm animals with local surveys and references.

Pupils' Progress Clubs—Organization for boys' work in poultry improvement (Poultry Club); and seed improvement (Corn, Oat, Barley or Potato Clubs), and for girls' work in home-cooking or sewing, growing and canning tomatoes or cultivating flowers (Tomato or Flower Clubs); winter reading in connection with these.

Physical Science—Practical lessons on air and liquid pressures—Common pump, barometer, lactometer.

FEBRUARY

Plant Studies—1. Germination tests of seed to be sown on local farms—Structure of little plants—Effects of light, heat and moisture on growth.

2. Study of apple or other fruit tree twigs to learn age, markings, fruit and leaf buds, etc.

Farm Crops—Study of structure of head of wheat and wheat grain—Comparison with oats, barley, corn—The legumes and their tubercles.

Milk Studies—Determination of specific gravity—Estimation of fat with Babcock Test—Pupils' cow testing work at home—Cow Testing Associations under Department of Agriculture, Ottawa.

Physical Science—Simple application of electricity and steam.

MARCH

Plant Studies—Estimation of weed-seed impurities in seed to be sown locally; testing seed for germibility—Grading of seed samples under the Seed Control Act.
Farm Work—Maps of home farms showing the proposed plans of cropping—Rotations—Systems of farming.
Garden Work—Commencing seeds in boxes in windows or hot bed—Preparing stakes, labels, tools, window boxes, hanging baskets—Purchasing seeds, fertilizers, etc.—Settling plans for garden experiments.
Soil Studies—A simple analysis—Classification of samples of soils—Water holding capacities—Effect of lime on clay—Soil maps of pupils' home farms—Local drainage schemes and possibilities.

APRIL

Plant Studies—Grafting and pruning—Practice on neglected trees—How to restore an old orchard.
Farm, Garden and Orchard Work—Implements used in spring work—Their principles of construction—How and why used—Spraying outfits—Preparation and uses of fungicides and insecticides.
Farm Arithmetic—Problems based on actual local operations—cost of plowing, harrowing, seeding, rolling, cultivating.
Garden Work (for April or May)—Preparing the ground, laying out plots, planting.

MAY

Plant Studies—Identification of weed seedlings in garden—Study of fruit blossoms and formation of fruit—Practice in proper method of planting fruit or shade trees.
Arbor Day—Organization for school ground improvement—Local bee to clean, level, plant trees and shrubbery, mend fences and outbuildings, prepare garden, improve road in front of school—Sports and social.
Animal Studies—Earthworm, bee, toad, beneficial birds, particularly in relation to agriculture.
Garden Work—Class instruction and exercises in thinning, mulching and weeding—Studies of seedlings' development—Setting out of window boxes and hanging baskets.

PLAN OF SCHOOL GARDEN, HOME PROJECTS, Etc.

Showing location with respect to school—Area—Flower beds—Experiments and demonstrations—Vines and shrubbery planted—School ground improvement undertaken—Work undertaken by School Progress Club or pupils at home—Plans for supervising—How supervised and results of experiments.

JUNE

Plant Studies—Studies of flower structures, such as corn, wheat, potato, tomato—Spraying for plant diseases.
Road Improvement—Principles of good road making—An ideal country road—Improvement of road in front of school.
Class Excursion—Directed excursion to Agricultural College or other Experimental Farm for older pupils.
Insect Studies—Work of common injurious insects such as cutworms, codling moth, oyster shell bark louse, cabbage butterfly and remedies.
Garden Work—Leaving all garden work in good shape—Definite arrangements for the care and protection of the garden during holiday, for observations and necessary harvesting.

SUMMER HOLIDAYS

Indicating how the garden was cared for, and what work was done, also condition at school opening.

SEPTEMBER

Plant Studies—1. Weed study excursion—Preparation of mounted collections—Seed collections—Identification tests—Methods of eradication.
2. Pupils' selection of corn in standing crop for seed and exhibition.
School Fair—Display of Progress Club's products (home made articles, poultry, potatoes, oat sheaves, etc., by boys, and sewing, cooking and canning by girls), garden produce, collections, demonstration of experiments carried out at school—Judging and awarding of prizes of books, bulbs, etc.
Insect Studies—The housefly, its structure, habits, life history and suppression—Estimation of damage by codling moth.
Reading—Selection and purchase of agricultural books for school and home libraries. A Farmer's library—Winter's reading plans.

OCTOBER

Plant Studies—1. Collection of apples and other fruits for competition and judging—Talk by local fruit grower—Testing pupils' ability to recognize varieties—Methods of packing and shipping.
2. Collections of injured or imperfect fruit—Causes and remedies.
Farm and Orchard Work—1. Threshing—Storage of crops—Model Barns—Silos—Estimates of yields—Determination of weights of bushels of grain.
2. Fall preparation of soil—Implements used and problems on cost of plowing, etc.
3. Fall pruning—Practice on neglected trees—Cover crops.
Garden Work—Taking cuttings and plants from garden for school or home windows or wintering over—Planting bulbs in school border or forcing for winter bloom—Fall preparation of school garden, cleaning, manuring, and plowing.

NOVEMBER

Corn Fair—Collections of selected corn for competition—Judging competitions—Reading prize essays.
Farm Work—Wintering the farm animals—Good stabling and up-to-date appliances—Feeding—Care of poultry—Best hen houses.
Reading—Class debates, discussions on agricultural topics.
Physical Science—Simple experiments on air.

DECEMBER

Animal Studies—Breeds of farm poultry—Visits to poultry or live stock shows—Survey and census of local poultry industry—Marketing poultry.
Reading—Reviews of subjects read up by pupils in books, papers or bulletins.
Physical Science—Practical exercises with thermometers—Use of dairy thermometer—Weather records.

Junior Public School Graduation Examinations, 1916

AGRICULTURE AND HORTICULTURE

NOTE.—*The candidate may take either four questions from A and two from B, or three from A and four from B.*

Values	A
$4 \times 5 =$ 20	1. Discuss potato growing, using the following heads: (*a*) The preparation of "seed" for planting. (*b*) The method of planting usually adopted in Ontario. (*c*) The protection of the growing crop against the potato beetle. (*d*) The protection against late blight (potato rot). (*e*) The method of harvesting and storing the crop.
5	2. (*a*) Describe a good method of wintering bees.
$3 \times 5 =$ 15	(*b*) What is meant by (i) swarming, (ii) queen excluder, (iii) brood chamber, (iv) comb honey, (v) drone?
10	3. (*a*) Using illustrative drawings, give the life history of any *one* of the following insects: codling moth, tent caterpillar, cabbage butterfly.
10	(*b*) Outline a suitable method of combating any *two* of these named.
20	4. On May 15th a farmer buys 10 steers averaging in weight 655 lbs. each, at 5¾c. per lb., and pays for them by borrowing the money at 7% per annum. He pastures this stock until November 15th, the steers making an average gain of 310 lbs. each. He then sells at 6c. per lb., and, out of the proceeds, repays the money borrowed. Assuming the cost of pasture and management to be 75c. a head per month payable on November 15th, find the farmer's net profit.
20	5. Using the following heads, give a discription of any *four* of,—Perennial Sow Thistle, Wild Mustard, Purslane, Plantain, Canada Thistle, Dandelion:— (*a*) The method of seed distribution. (*b*) The characteristics by reason of which each weed persists as a pest. (*c*) The crops injuriously affected by each weed. (*d*) The method of combating each weed.
	B
$5 + 5 =$ 10	6. (*a*) Name two good fungicides used in spraying. (*b*) Name a fungus each is respectively adapted to check and describe the mode of application.
$5 + 5 =$ 10	7. (*a*) What breeds of poultry are called European breeds, and what are called Asiatic breeds? (*b*) Give four characteristics of each of the two types.
$5 + 5 =$ 10	8. Describe, using diagrams, the mode of constructing (*a*) a hot bed, (*b*) a cold frame.
$5 + 5 =$ 10	9. (*a*) Describe two methods of conserving soil moisture. (*b*) Point out the chief benefits to be derived from tile drainage.
$2 \times 5 =$ 10	10. Describe a good method of storing each of the following for winter use:—celery, cabbage, turnips, beets, parsnips.

Equipment for Teaching Agriculture

The rural schools are, as a rule, quite bare of equipment for teaching either practical Nature Study or Elementary Agriculture. Maps, a globe, a few books and charts, blackboard and crayons, constitute the general equipment. The introduction of Agriculture, however, makes it necessary to provide apparatus, much of which may be of a simple character, and some of it may be used to advantage for demonstration in other subjects. Samples of grain for illustrations, weigh scales for weighing grain, cups for measuring, can be used for teaching Arithmetic as well as for Agriculture. Babcock milk testers, lactometer, egg-candling apparatus, and a varied assortment of test tubes, litmus paper, some reagents, dishes, plates, saucers, and the like, should be at hand in every school. For the garden a suitable supply of tools of the most modern kind should be secured. Pupils are always interested in using appliances which are known to be up-to-date. Aside from hoes, spades, digging forks, rakes and the like, a suitable combination wheel cultivator and seeder should be in every school where there is a school garden.

The care of tools should be an important feature of school garden work, and time should be given to this feature of the work. When steel tools are put away for any length of time the steel, after having been cleaned, should be wiped with an oiled cloth. The oil prevents moisture and air from coming in contact with the steel, and keeps it bright and free from rust. The care of tools is not only an important matter in itself, but it leads to care in other things, and so reduces the loss in farming operations due to wear and tear. The teacher, who neglects to give attention to the care of tools, loses a large part of his opportunity for good in the school garden. This feature of Agricultural instruction is largely lost in the home garden plan because the teacher cannot give the matter close personal attention.

In order to make the best use of school equipment it should be stored in a suitable case or cupboard convenient for use. Equipment to be effective must be ready to hand, and the teacher usually has very little time to devote to the preparation and the arrangement of it before the class is called.

Agricultural books and periodicals are part of the equipment, and a few good books, and two or three periodicals should be in every rural school. And it must be remembered that books are to be used and not to be kept locked up in a case. Supplementary reading during spare periods can be taken from the books and periodicals on Agriculture, as well as from classical literature. The following list of books includes many that are particularly suitable to rural schools. Those in italics are perhaps the most suitable.

List of Text Books and Supplies Recommended for Teachers and Students of Agriculture

GENERAL AGRICULTURE

Elements of Agriculture	Warren	$1 10
Agriculture for Beginners	Burkett, Stevens & Hill	75
Essentials of Agriculture	Waters	1 25
Rural Arithmetic	Calfee	30
Soil	King	1 50
Soil	Hall	1 50
Beginnings in Agriculture	Mann	75
Farm Management	Warren	1 75
One Hundred Lessons in Agriculture	Nolan	65
First Principles of Agriculture	Golf & Mayne	80
Agriculture for Young Folks	Wilson	80
High School Agriculture	Mayne & Hatch	1 00
Elementary Principles of Agriculture	Ferguson & Lewis	1 00
Principles of Agriculture	Bailey	1 25
Fundamentals of Agriculture	Halligan	1 20
Productive Farming	Davis	1 00

Elements of Farm Practice	Wilson	$ ..
Practical Lessons in Agriculture	Lester S. Ivins	84
Laboratory Manual of Horticulture	George H. Hood	..
Agriculture and Life	Cromwell, A. D.	1 50
Agriculture Through the Laboratory and School Garden	Jackson, C. R., and Daugherty, L. S.	1 50
Agriculture Through Home and School Garden	Stebbins, C. A.	1 00
Elementary Exercises in Agriculture	Dadisman, Macmillan Co.	50
An Introduction to Agriculture	Upham, Renouf, Montreal	75
Elementary Agriculture	Hatch & Hazelwood, Education Book Co.	75
Elementary Agriculture for Schools	McCaig	1 00
Practical Lessons in Agriculture	Ivins and Merrill	75

AGRICULTURAL BOTANY

Agricultural Botany	Percival, Holt	$2 50
The Living Plant	Ganong, Holt	3 50
Mushrooms	Atkinson, Holt	3 50
Field, Forest and Garden Botany	Gray	1 80
Text Book of Botany	Strasburger	5 00
The Evolution of Our Native Fruits	Bailey	2 00
Plant Breeding	Bailey	2 00
Fodder and Pasture Plants	Dept. Agriculture, Ottawa	75
Farm Weeds	Dept. Agriculture, Ottawa	1 00
Our Native Trees	Keeler	2 00

BACTERIOLOGY AND HEALTH

Bacteria in Relation to Country Life	Lipman	$1 50
Microbiology	Marshall	2 50
Bacteria, Yeasts and Molds in the Home	Conn	1 00

BEEKEEPING

Beekeeping	Philips	$1 50
How to Keep Bees for Profit	Lyon	1 50
Writing on Bees	Alexander	50
The A, B. C. and X, Y, Z, of Bee Culture	Root	1 75

DAIRYING

Milk and its Products: A Treatise Upon the Nature and Qualities of Dairy Milk and the Manufacture of Butter and Cheese	Wing, H. H.	$1 50
Dairy Cattle and Milk Production	Eckles, C. H.	1 60
The Farm and Dairy	Sheldon, J. P.	1 00
Canadian Dairying	Dean	90
First Lesson in Dairying	VanNorman	50
Questions and Answers in Butter Making	Publow	50
Farm Dairying	Laura Rose	1 25
Testing Milk and Its Product	Farrington and Woll	1 25

ENTOMOLOGY

Elementary Entomology	Sanderson and Jackson	$2 00
Insect Life	Comstock	1 75
How to Know the Butterflies	Comstock	2 25
Manual for Study of Insects	Comstock	3 50
Insect Pests of Farm, Garden and Orchard	Sanderson	3 00

FARM ANIMALS

Manual of Farm Animals	Harper, M. W.	$2 00
The Training and Breaking of Horses	Harper, M. W.	1 75
Sheep Farming in North America	Craig and Marshall	1 50
Types and Breeds of Farm Animals	Plumb	2 00
Swine	Day	1 50
The Horse	Gay	1 50
Judging Live Stock	Craig	1 50

FLOWERS AND ORNAMENTAL PLANTS

Flowers and How to Grow Them	Rexford	$0 50
Book of the Rose	Mellier	1 75
Daffodils and Narcissus and How to Grow Them	Kerley	1 10
Flower Garden	Bennett	1 10
Home Horticulture	Rexford	1 00
Vines and How to Grow Them	McCullen	1 10
Flower Guide	Reed	68

NATURE STUDY

Public School Manual		$0 19
Nature Study and Life	Hodge	1 50
How to Teach Nature Study	Dearness	60

Nature Study	Silcox and Stevenson	$0 75
Nature Study and the Child	Scott	1 50
Practical Nature Study	Coulter	75
Birds, Bees and Sharp Eyes	Morley, M. W.	60
Insect Book	S. O. Howard	..
Moths and Butterflies	Dickerson, Mary C.	1 80
Plant Life, First Studies of	Atkinson	60
Stars, The Story Land of	Pratt, Mara L.	50
Sylvan Ontario	Muldrew	..
Winter Sunshine	Burroughs	50
Principles of Plant Culture	Goff, E. S.	1 10
Elementary Agriculture and Nature Study	Brittain, Educational Book Co., Toronto	75
Bird Neighbors, Blanchan	Doubleday	3 00
New Canadian Bird Book	MacClement	2 50
Hand Book of Nature Study	Mrs. Comstock	3 00
Nature Study and Elementary Agriculture	Hamilton, McGill (Univ.)	50

POULTRY

How to Keep Hens for Profit	Valentine	$1 50
Poultry Craft	Robinson	1 25
American Standard of Perfection		2 00
Productive Poultry Husbandry	Lewis	2 00

RURAL ECONOMICS

Challenge of the Country	Fiske	$0 75
Rural Life in Canada	McDougall	1 00
Principles of Rural Economics	Carver	1 30
Co-operation in Agriculture	Powell	1 50
An Introduction to the Study of Agricultural Economics	Taylor	1 25

SPECIAL CROPS

Alfalfa	Coburn	$0 50
Bean Culture	Sevey	50
A, B, C of Potato Culture	Terry	50
Cabbages, Cauliflowers and Allied Vegetables	Allen	50
Celery Culture	Beatty	50
Mushrooms and How to Grow Them	Falconer	1 00
New Onion Culture	Grainer	50
Tomato Culture	Tracy	50

SOILS AND FERTILITY

The Fertility of the Land	Roberts, I. P.	$1 50
The Principles of Soil Management	Lyon, T. L.	1 75
The Soil: Its Nature, Relations, and Fundamental Principles of Management	King, F. H.	1 50
Fertilizers: The Source, Character and Composition of Natural, Home-made and Manufactured Fertilizers, and Suggestions as to Their Use for Different Crops and Conditions	Voorhees	1 25
Manure and Fertilizers	Wheeler, H. J.	1 60
Soils and Fertilizers	Snyder, H.	1 25
Rocks, Rock-weathering and Soils	Merrill, G. P.	4 00
Crops and Methods for Soil Improvement	Agee, Alva	1 25
Soils and Plant Life	Cunningham	1 10

SCHOOL GARDENS

School Gardens	Meier, Ginn & Co.	..
Practical School Gardens	Elford, Oxford	$0 70
Among School Gardens	Greene	1 25
How to Make School Gardens	Hemening, Doubleday	1 00
Children's Gardens for Pleasure, etc	Sturgis & Walton	1 00
Public School Garden Book	Weed, Scribner	1 25
Gardens and Their Meaning	Wright, Ginn & Co.	1 00
Vegetable Gardening	Watts	1 75
Manual of Gardening	Bailey	2 00
Vegetable Gardening	Green	1 00
Garden Farming	Corbett	2 00
Landscape Gardening	Waugh	1 00
The Principles of Vegetable Gardening	Bailey, L. H.	1 50
The Beginner's Garden Book	French, Allen	1 00
School and Home Gardens	Meier, W. H. D.	80

BOTANICAL SUPPLIES

Genus Covers, per dozen	20c.
Plant Mounts, per dozen	10c.
Drying Paper, per dozen	12c.
Herbarium Labels, per hundred	15c.
Dissecting Scalpels, each	20c.
Bent Forceps, each	20c.
Straight Forceps, each	20c.
Dissecting Needles, each	5c.
Adhesive Tape, spool	5c.

Vials, per dozen	18c.
Clasps, per dozen	10c.
Wood Seed Labels, per booklet of 48	5c.
Wood Seed Box, fitted with Mounting Card, each	10c.

GENERAL SUPPLIES

Science Note Books, fitted with four special fillers, each	50c.
Perpetual Note Books L. L., each	25c.
Special Fountain Pen, and up	$1 00
Also Blotting Paper, Pens, Pencils, Ink, Erasers, Paper Fasteners, Rubber Bands, Compasses, Rulers, O.A.C. Pads, Note Paper and Envelopes, Blank Books, Eye Shades, etc.	
Waterman's Fountain Pen, and up	$2 50

ENTOMOLOGICAL SUPPLIES

Standard Pins, No. 210, adopted by the United States and Canadian Governments, per dozen	18c.
Stretching Boards, each	18c.
Insect Boxes, each	65c.
Labels, per hundred	10c.
Riker Mounts, each—15c., 19c., 23c. and	40c.
Insect Nets, each	25c.

School Fairs

The organization known as School Fairs is under the direct charge of the District Representative of the Department of Agriculture of the county, in co-operation with the Public School Inspector. The chief object of this organization is to arouse an interest in experimental work at the homes of the pupils, and to educate the country boys and girls along practical lines, not only in home garden work, but also in business methods as well.

As the organization develops it assumes usually the township as a unit with a centre located at some convenient point. At this centre the schools concerned assemble their produce for exhibition. The products may be from home gardens or plots, but it is intended as soon as the school garden progresses, to make competitions of products from the school gardens an important feature of the fair. As it is at present, there is some danger of having on exhibit, under the name of a pupil, material which represents the work of a too industrious parent or friend, rather than that of the pupil. This feature, though not so important as some suppose, will gradually become less in proportion as the school garden institution becomes more general, because the teacher will then be a directing force throughout the whole season during which the crop is grown.

The Public School Inspector is expected to supervise the home projects by questioning the pupils and teacher, on the occasion of his visits, concerning the problems undertaken, and by giving advice and assistance to the teacher and pupils with reference to the fair. As the Inspector is responsible for the schools under his charge, he is the person upon whom the Department of Education depends to see that the fair is made, as much as possible, an educational institution. He will assist and guide the District Representative towards that end.

The live stock exhibits in a school fair may be made an important feature if properly managed. A colt or calf, halter-broken, groomed and handled by a pupil, is always interesting and instructive. Exhibits of poultry hatched and raised under the charge of a pupil, especially if eggs be obtained from some source which would indicate uniformity as to quality and breed, should form a very important factor in the fair.

In order to secure uniformity as a basis of competition in plant products, it is necessary to see that the pupils have seed of the same kind. When this is the case, the competition is fair, and judging is made easier. In awarding prizes it is, as a rule, better to have the prizes small and numerous than to have a few prizes of greater value.

School Fairs are not obligatory on the schools, but trustees and teachers are invited to co-operate with the Inspector and the District Representative in managing and financing the organization. The details of arrangement may be made to suit those concerned.

Where there is no District Representative, the burden of management will fall upon the individual schools, and especially upon the Inspector and the teacher. In such cases each township should have, either a trustees' association, or a township teachers' association, or better still, an association of both combined. This would facilitate matters very materially, not only in the management of the school fair, but also in promoting rural improvement and uniformity in school matters.

It is intended that the school fair movement shall be a school institution, and that it will not be absorbed by either the county fair or the township fair.

Home Gardens

Grants

Where Agriculture is taught in the public school, either home gardens or school gardens are necessary in order that some practice in individual work may be had. Under the home garden plan, the grants to the school board are $15.00, if the work is in charge of a teacher holding an Elementary certificate in Agriculture, and $10.00 if the teacher holds a Second Class certificate. In each case, reports have to be submitted to the Department of Education stating that the money has been spent. To the teacher conducting classes under the home garden plan, and holding an Elementary certificate in Agriculture the grant is $30.00, to the teacher holding an Intermediate certificate in Agriculture $45.00, and to a teacher holding a Second Class certificate $15.00. In all cases the requirements have to be fulfilled, and the regulations complied with to the satisfaction of the Public or the Separate School Inspector.

Plans

The work of the home garden is difficult to follow out, because it is necessary to visit the homes to give individual instruction and guidance. If it is followed up thoroughly, however, the results for good are important and far-reaching. Before practical work is commenced on a project, the matter should be discussed carefully with the pupil, and the teacher should see that the pupil has a good idea of the aim and purpose of the project, and of the method to be employed. This will require discussion and directed reading, and the likes and dislikes of the pupils should have the utmost consideration. Where several pupils undertake the same projects, the matter becomes simplified.

General gardening problems of a simple character would be advisable at the start, and as the pupil advances more difficult problems may be undertaken.

Visiting

It is a part of the teacher's duties to visit the pupils two or three times during the season, to discuss with them details of management, and to give instruction when necessary. The first visit should be made soon after the project has been started, and another in the Fall towards the close. Other visits should be made where possible. This work of supervising by the teacher should be productive of good results from the very fact that the teacher will be able to see the pupil at his home, and talk over matters of mutual benefit. In most cases the parents

take a deep interest in the work of their children, and often can give the teacher good advice and assistance, not only for the work in connection with the project, but also for other features of school work.

Where there is a county representative and a school fair organization, some of this work of visiting will fall upon his shoulders, but it should not be left entirely to him, because, quite frequently, some pupils of the classes do not undertake problems under his direction, and these would be left out of consideration unless the teacher should take the matter in hand, and follow it up. Moreover, the District Representative is unable to make more than one visit, or at most two visits, to the pupils, and this is unhappily, quite frequently, too meagre an amount of instruction.

In many cases the home garden may be made supplementary to the school garden, and where this plan can be carried out much good will result, because it will link up the home and the school in such a way as to prove of benefit to both. If seed selection is a part of the work of the school, the investigation may be continued at the home plot. In this way the tendency of education will be towards the farm rather than away from it.

Beautifying School Grounds

Requirements

One of the requirements in connection with the teaching of Agriculture in the country schools is that attention shall be given to the ground and buildings. Many country schools present a neglected appearance, and are anything but beautiful and home-like. The blame for this does not lie altogether at the teacher's door, yet if the teacher assumes a leading part, parents and trustees are usually willing to give encouragement and sometimes to lend a hand. Pupils are always willing to give assistance, especially if time be taken from the regular programme. And by all means it would be a wise move to take time to engage in such an important educational function.

Tree-Planting

Trees are, without doubt, the most important feature in a landscape, and, therefore, if trees are not already on the ground, they should be planted under the direction of the teacher. The Department of Education has set apart Arbor Day—the first Friday in May—as a day to be devoted to ground improvement in general, and to tree-planting in particular. Where the school is located near a woods, trees may be dug up there, and removed to the school grounds, but this digging up is a difficult job, and requires considerable physical strength. Therefore it might be well to secure the services of an able-bodied man for this part of the work.

In removing trees from the ground, too great care cannot be given to the work. The bark must not be wounded, and the roots should be cut off as clean as possible and some soil left adhering. The tree should be pruned back when lying on the ground, by cutting with a sharp cut each branch removed. If trees are to be transplanted in the summer when in full leaf, it is best to prune back before digging up, as this will prevent loss of water by transpiration during the time between digging up and re-setting. It will assist the tree to recover, if a cap made of burlap be placed about the tree top to prevent loss of water during the first few days of its life in the new position. The tree ought to be planted slightly deeper in its new abode than it was in the old, thus providing a little extra soil to act as a

ballast against injury by wind. A few stones placed on the ground near the trunk will assist not only in keeping the roots firm, but also in acting as a mulch to prevent loss of water by evaporation from the soil near the roots.

Where it is not possible to secure trees from woods in the neighbourhood, it is then necessary to buy them from a nursery. In such cases attention has to be given only to the planting. The kind of trees to be used will depend upon the neighbourhood and its soil conditions, but as a general rule, for deciduous trees, the American Elm, Basswood, and Soft Maple, are easily grown and grow rapidly. For evergreens, the Norway Spruce and the Colorado Blue Spruce are available and grow readily in Ontario. Our own native Black Spruce and White Spruce are so subject to Gall Louse that they are difficult to raise. The Manitoba Maple (Box Elder) is easily grown, and grows very rapidly, but it is not a very good tree when it is grown and is short-lived. There is no good reason why Sweet Chestnut, Shell Bark Hickory, and Black Walnut should not be used here and there. They are very valuable trees and are becoming scarce in Ontario. For variety the Paper Birch, White Pine and White Ash make a good appearance. The trees to be avoided are Poplars and Willows (except for a wet boggy place). Oak, Beech and Ironwood grow too slowly. The Sugar maple is difficult to grow now, on account of borers which work around the trunk near the root, but this is one of the most magnificent trees, and has been grown with great success when borers were not so plentiful as now.

Shrubbery

Too little use has been made of shrubs for decorating school premises, and frequently, when they have been employed, little attention has been given towards locating them in suitable places on the grounds. If shrubs are properly placed they may be made very effective in improving the grounds.

The kind of shrubs to be used will depend quite largely upon local conditions as to soil, climate, and general plan of the school. For damp ground there is no better shrub than the Red Osier Dogwood. In fact this shrub, a native of our swamps, will do well on almost any kind of soil. The swamp bush honeysuckle is a fast grower, and does well in clay land. So does the Black Elderberry, and several species of Viburnum. The Hazel makes a good dense shrub, and can be had from the woods. The Wild Rose should also have consideration. All the above mentioned are natives of Ontario, and make first-class decorative shrubbery. But, of course, there are many other beautiful shrubs which have been introduced from foreign countries, and which do well here, but a strong plea is made for our own shrubs, highly prized in other countries, but neglected here in Ontario. The common Barberry is an interesting shrub, but should never be used because of the part it takes in the promotion of wheat rust.

In arranging for a location in which to plant shrubbery, the whole landscape is to be considered. As a general rule, shrubs should be used in corners, or as shields for outhouses, or for other places which should be shielded. In no case should a shrub be placed in the middle of an open space like a lawn or yard.

Lilacs have long been favourites, and may be used where a high shrub is required. The Shad Bush or June berry is also a favourite where a high shrub is required. The common Arbor Vitae or cedar of our swamps, makes an excellent evergreen shrub, and is of the greatest service as a shield in both winter and summer. It grows readily with a moderate amount of care.

School Gardens

The School Garden movement is making steady progress, although a great variety of difficulties crop up here and there. At the time rural school grounds were set apart for school purposes and buildings established on them, school gardens were apparently never thought of; consequently, in many cases it is not easy to secure a suitable plot of land without encroaching upon the playground. The natural reluctance which teachers and School Boards have to adopting any new feature in education has a retarding influence. It is always easy to wait to see others start, and there is a natural reluctance against pioneering. In many cases the teacher is afraid of failure, and a failure in School Gardening would be too noticeable. Teachers are not long enough in one position and this is offered as an excuse for not only failing to start but also failing to carry on that which has been started. And trustees and parents in some cases assume the attitude that there is no need of a school garden, because the pupils can get plenty of gardening to do at home. Some parents say that the garden work at school interferes with the established school work and prevents rapid promotion.

Of course many of the above difficulties and objections are passing away, and it is not to be expected that the introduction of School Gardens as an institution in Ontario will be accomplished all at once. The rapidity of introduction will be largely dependent upon the availability of qualified teachers. The supply of teachers who have certificates in Agriculture is increasing year by year and the outlook for the future is very promising. There is already some reason to hope for more permanency of position for the teacher due to the introduction and the maintenance of school gardens in the rural schools.

The kind of crops to be grown will depend upon the local conditions, the size of the garden, and the character of the soil. As a rule some attention should be given to decorative plants, but while the war lasts every effort should be put forth to grow plants of value as foodstuffs, even though the total product of one school garden does not appear large in money value.

Inspectors and Inspection

The Public and Separate School Inspectors are expected to take an active part in promoting Agricultural Education, especially where the inspectorate covers rural districts. In many cases they have made an excellent start and are showing praiseworthy enthusiasm in assisting teachers and encouraging trustees to advance along the lines laid down.

During the summer months of 1914 and 1915 young men having teaching experience in Public Schools, and under-graduate standing of two years at the Ontario Agricultural College were appointed to assist in the work of introducing Agriculture into the Public Schools. These young men of whom there were only a few in the whole Province, had a very large area to cover and, no doubt, expended a large amount of energy while they were engaged in the work, but as the summer vacation occurred during the middle of the time which might be used by these men, the results actually accomplished were scarcely warranted by the expense and effort put forth. These men were called Field Agents who acted as inspectors of the Agricultural classes and made reports to the Department of Education concerning the work. As the District Representative of the Department of Agriculture visited many of the rural schools to give assistance to the teachers and pupils along the same line, the teachers became somewhat confused. What with regular visits

of the School Inspector, the occasional visit of the Field Agent, and of the District Representative, the teacher began to wonder what next. However, if a glance be given at the table showing the number of schools teaching Agriculture it will be seen that the numbers increased considerably during these years. The office of Field Agent was abolished in September, 1915.

This work of inspection for two years performed by the Field Agent was, in September, 1915, assumed by the Public and Separate School Inspectors. In order to give these men some idea of the Agricultural situation a short course covering two weeks was given them at the Ontario Agricultural College in July, 1915. Practically all the inspectors attended this short course and there is good reason to suppose that they received considerable profit from it. The report concerning the attitude of these men towards the work provided was very favourable indeed. No class at the College in all its history gave closer attention to the lectures and demonstrations given. No body of men showed greater zeal for, or gave closer attention to, the subjects in hand.

It must be realized by any one at all familiar with such work that to provide a course of two weeks which would in any way do justice to the professors concerned, to the subject undertaken and to the inspectors, is a task that might stagger the veriest enthusiast. The work on the whole was satisfactory to the Inspectors and quite creditable to the College staff, although at this season of the year the staff is frequently crippled by the unavoidable absence of some of its strong men.

The suggestion is here thrown out that it would be a wise move for each inspector who has rural schools under his charge to take one of the Summer Courses provided for teachers at the Ontario Agricultural College. If the Inspector is a Science Specialist he should take the Intermediate Course; if not, perhaps the Elementary Course would be more suitable to his needs. In either case he should aim to secure a certificate. Our system of education in Ontario tends towards certificates of one kind or another; and this is in many ways a good tendency, because the work leading towards something tangible, something definite, is likely, in the majority of cases, to be more thoroughly done, and the individual is likely to gain more from work laid out upon such a plan. If Inspectors could see their way clear to attend the teachers' courses there should be no need of further short courses for them.

The regulations setting forth the duties of Inspectors respecting Agriculture are here given:

Agriculture and Horticulture, Manual Training, and Household Science

As is evidenced by the provisions of the Revised Regulations, the Minister desires that Ontario shall emphasize the teaching of Agriculture and Horticulture and the associated Nature Study in both the rural and the urban schools, so far as is consistent with the claims of the essentials of a general education. For this purpose a larger share of the Federal grant is now available; and more generous grants than heretofore are open to both urban and rural schools whose Boards and teachers maintain classes in these subjects.

The Inspectors should also note that, in addition to the classes in the Public and Separate Schools, for the efficiency and control of which classes they are responsible to the Minister of Education, short courses for farmers and their sons are conducted under the Minister of Agriculture by the District Representatives of his Department. As prescribed in the Revised Regulations, School Fairs will also be conducted as educational projects by the same officers, who have been instructed to associate with themselves for this purpose the Public and Separate School Inspectors and teachers concerned. Of such co-operation the Ministers of Agriculture and Education heartily approve.

The attention of the Inspectors is also called to the special provisions in the Regulations for the establishment and maintenance in rural and village schools of courses in Elementary Manual Training and Household Science especially adapted to the require-

ments of farm life. For some years at any rate the courses in Household Science will, no doubt, appeal more strongly to village and rural School Boards, especially to the former, and there is no reason why in many of the schools under such Boards Household Science at any rate should not be taken up with the simple provision contemplated in Circular No. 3. When, in the judgment of the Inspector, the establishment of such classes is feasible, he should bring the subject before the Boards and should notify the Minister in order that the special Departmental Inspector concerned may follow up his action.

It will also be the duty of the Public School Inspector to further to the best of his ability the interests of Agricultural Training, Manual Training, and Household Science teaching by conferring with the ratepayers and the township and county councils.

It will hereafter be the duty of each Public and Separate School Inspector to inspect half-yearly the teaching of Agriculture and Horticulture in the schools of his inspectorate, and to make a special report thereon to the Minister and the School Boards, on the form which has been supplied by the Department. This work he will perform either at his ordinary or at special visits, as he may find more convenient.

In accordance with his promise in the same circular, the Minister now announces that in the case of schools which carry on throughout the school year the courses in Agriculture and Horticulture prescribed by the Regulations, he will make the Inspector an annual allowance of $6.00, payable in August, for each such school taught by a teacher with a certificate obtained on a Departmental examination in Agriculture and Horticulture, and of $4.00 for each such school taught, after 1915, by a Second Class teacher without the certificate in Agriculture and Horticulture, but with a knowledge of the subjects satisfactory to the Inspector, such payment being subject to the provision that the Inspector has performed satisfactorily to the Minister the duties prescribed above and in the Regulations.

In order to satisfy himself in regard to the efficiency of the home projects, whether carried on partly under the guidance of the District Representative, or wholly under the supervision of the teacher the Inspector should require written reports from the teacher concerning each project, and he should make it his business to examine some of the pupils concerning individual projects. At each inspection he should see that the garden tools are properly cared for, and that the equipment has storeroom. Much of the success of the work in this regard will depend upon the attitude of the Inspector. Where school gardens are carried on it would be wise, as far as possible, to visit such schools either in spring or fall during the growing season. Of course if every school had a garden this would not be possible. At all events where a teacher is commencing the work it would be wise to keep in close touch with this teacher and this school until the work becomes established. Where a garden has made a good start and the school is in charge of a capable teacher one visit might be made during the growing season and the other in the winter time. By the exercise of some judgment this phase of the problem may be managed even if the number of schools be increased considerably.

My duties do not include the direct supervision of Agriculture in the Public or Separate Schools. Notwithstanding this I should be glad to visit, in co-operation with the Public or Separate School Inspectors as the case may be, as many such schools as time will permit.

The following Public and Separate Schools were visited, some of them in company with the Inspector:

Ardtrea, Bethany, Blackstock, Guelph Separate School, Hampton, Janetville, No. 3 North Easthope, Orangeville, Orono, Smith's Falls Separate School, Stamford and Winchester.

Of the above mentioned schools five (Orono, Hampton, Blackstock, Bethany and Janetville) are in the county of Durham in the Inspectorate of W. E. Tilley. Arrangements were made previously by the Inspector to visit these schools and hold meetings in these centres with the object of interesting teachers, trustees, parents and pupils in Agricultural education. Practically all the teachers of the rural schools were in attendance at one or other of the meetings and the turnout of

trustees was very gratifying indeed, as all the rural schools were represented. The attendance at all the meetings was good and especially so at Hampton where the hall was filled. The places named above are merely hamlets in the county and many of those who attended had to drive ten miles over very badly drifted roads.

In only one instance was there any objection offered to the introduction of Agriculture to the school programme. In this case the objection arose out of a misunderstanding which was easily explained away. The District Representative, Mr. Duncan, gave an address at each of two meetings—Orono and Bethany—on The School Fair. All the schools in Durham were organized for School Fairs in 1916.

High Schools

The following Collegiate Institutes, High Schools and Continuation Schools (Secondary Schools), were teaching Agriculture and qualifying for grants in 1915: Clinton, Picton, Smith's Falls and Vankleek Hill; Arthur, Bowmanville, Hagersville, Niagara Falls South, Oakville and Winchester; Cannington, Drayton, Exeter, New Liskeard and Ridgeway—15 in all. These schools were visited once during the fall term of 1915 and once again during the spring term of 1916—30 visits. During the fall term of 1916 the following schools were visited: Smith's Falls, Vankleek Hill, Niagara Falls South, Winchester, Cannington, New Liskeard and Ridgeway—7 schools.

The following schools commenced the work in September, 1916: Brockville, Renfrew, Geeorgetown, Essex, Kincardine and Whitby—6 in all. Excepting Essex all these were visited during the fall term of 1916—5 visits, making a total number of visits to schools teaching Agriculture of 42.

Owing to the enlistment in March of Mr. Butson who was teaching Agriculture in the Bowmanville High School, the subject was temporarily dropped because a teacher qualified for this work could not at the time be secured. This school carried on the work throughout the Lower and Middle Schools. The only other school attempting Middle School Agriculture is the Arthur High School. Both these schools have Upper School classes and most of the students in these classes have taken the advantage of the bonus privilege allowed for this subject and have used it with success for examination purposes.

Whitby High School introduced Agriculture as a Department in September, 1916, and has made a fair start. The School is located in an excellent farming district and has the advantage of the assistance freely given by Mr. Tipper, the District Representative of the Department of Agriculture, who is located at Whitby.

It is proposed to visit the schools that are just commencing to teach Agriculture twice a year, and to visit those that have made a good beginning once a year. Because of the fact that the High School programmes are thought to be overcrowded, and that additional subjects are more or less of an added burden, not only to the staff, but also to the pupils, considerable sympathy and assistance are needed in order to give the subject a fair start. After a year or two it will be found that the subject can be adapted fairly well to even a crowded curriculum, and that many of the difficulties which loom up large at first will soon pass away.

There are some 600 pupils receiving regular instruction in Agriculture in the secondary schools. The teachers are, for the greater part, Science Specialists who are well qualified to profit by the special courses of training in Agriculture required for the Intermediate certificate, and also to give instruction in the subject.

The course of study is well suited to both boys and girls, and from careful observations in this connection it is found that the girls not only take as great an interest in the work, but they also make progress equally satisfactory. In all the schools except one both girls and boys take the classes although the subject is optional. Niagara Falls South High School is the only one in which the classes are made up exclusively of boys. Domestic Science is also taken in this school and the programme is so arranged that Agriculture and Domestic Science come at the same hour. This arrangement is not made, it is understood, with the idea that Agriculture could not profitably be taken by the girls who take Domestic Science, but rather to meet the exigencies of the time-table. In view of the fact, however, that many of the girls now attending High Schools will, in the ordinary course of events, become teachers of rural schools where Agriculture is rapidly becoming established as a regular, though optional, subject, the need for some training along Agricultural lines is quite apparent. The period of adolescence of young women is really the High School period, and the influences of education stamp themselves with unusual permanence and power upon the mind at this stage of life, consequently, if Agricultural education is to make the maximum impression it must be taken at this time.

Therefore, in order that the subject be made more effective in the rural school it should be a required part of the High School course at least for those who expect to become teachers in the Rural Schools. The vast majority of teachers of the rural schools are female teachers; hence the apparent necessity of having the High School programme so arranged that the girls may take the subject. It would be an improvement in many ways if Agriculture were obligatory for entrance to Normal Schools, for then in a few years all the incoming teachers would have had some training in Agriculture, even without the special courses offered, and would thus be able to manage classes and give instruction, with some measure of success, in Elementary Agriculture. Two other advantages stand forth as also quite apparent. (1) The two-year course, or four-year course of study of the subject in the High School would wield a powerful influence in shaping the attitude of the teacher towards rural life. (2) Very few lady teachers remain teachers all their lives. Sooner or later they "set up a smoke" for themselves and when they do the knowledge gained while studying Agriculture in the High School will, in nine cases out of ten, prove profitable and enjoyable.

The following schools, not at the time taking Agriculture, were visited, nearly all by previous arrangements, with a view towards explaining the situation and discussing with boards and teachers the conditions necessary to introduce and to maintain the classes:

Collegiate Institutes: Brantford, Napanee, Orillia, Ottawa, Peterborough, Renfrew, Ridgetown, Windsor; *High Schools*: Arnprior, Beamsville, Bracebridge, Dundalk, Durham, Essex, Leamington, Newburgh, Norwood, Orangeville, Port Elgin, Port Hope, Shelburne, Sydenham; *Continuation Schools*: Bath, Huntsville, Winona.

The difficulties in the way of introducing Agricultural Classes into the Secondary Schools, from the viewpoint of the principals and teachers of the schools are here indicated: (1) There is generally a too crowded programme in the Lower School. (2) Two hours a week implies four periods and this number does not lend itself to a convenient arrangement of the time programme. (3) Latin as a bonus subject has the advantage over Agriculture in that it leads to matriculation in the Middle School. (4) Art is fortified as a bonus in both the Middle and

Upper Schools because it is an obligatory course in the Lower School. (5) There are very few qualified teachers of Agriculture.

All of these matters were discussed in detail with boards and teachers, and suggestions offered for a suitable arrangement.

Almost without exception the principals of the different schools were favourably disposed towards Agriculture and seemed to realize its importance especially as a regular subject in the course for candidates for Normal Entrance and for a general education.

The boards as a rule favoured the introduction of Classes in Agriculture and most of the individual members of boards were enthusiastic over the prospect. It should be mentioned that whether classes are organized or not will depend almost wholly upon the attitude of the principal of the school. No matter how favourably disposed towards the teaching of Agriculture the members of the board may be the matter is practically dependent upon the principal of the school and his staff of teachers.

I would call attention especially to this one feature of the whole Agricultural problem, namely, the establishment of a good strong course in the Secondary Schools under well qualified teachers. This is the "King bolt" of the machine.

Lower School Agriculture

The Lower School Course of Study is fairly complete in itself, and is rounded out with a view to the probability that a large majority of the schools maintaining classes in Agriculture will take no more than this course. It is recognized that a considerable proportion of the students who enter the High Schools do not proceed further than the second year, and it is to this class of student that the work in Agriculture will appeal. In fact the High Schools should reach out for such students, especially from the country, and offer them a programme including Agriculture. Fewer country boys and girls would then stop school when they pass the Entrance examination. The Lower School course covering two years would then meet the needs of the country pupils as it has never done before. We have blamed the country pupils for stopping school when they pass "the entrance," but the blame should be placed where it belongs, namely upon the school curriculum, and not upon the pupils. Where Agriculture has been introduced the results are already showing, although it will take time to change the views which people have inherited for generations regarding education.

Our Colleges have been planned for the minority. They prepare pupils for the Professions. When Hawthorne graduated from College he wrote to his mother: "I cannot become a physician and live by men's diseases; I cannot be a lawyer and live by their quarrels; I cannot be a clergyman and live by their sins. I suppose there is nothing for me to do but write books." The majority, however, are not born with the silver spoon in the mouth, they have to earn a living. They are needed as farmers, mechanics and producers. On the tax bill or voter's list, when a man has no employment, when he cannot be classed as farmer, labourer, professional man, artisan or mechanic, he is classed as a "gentleman." The idea back of this term is inherited from the past, and it was not conspicuously in the back-ground when college programmes were framed. The term is used probably for convenience largely, but there is hidden somewhere within it an idea that to work with one's hands in a regular systematic way, and make a living in so doing would put one in a class not under the heading "gentleman." Of course this idea is rapidily dying out, but it dies hard.

The High School which provides a class in Agriculture in the Lower School is doing something to dignify in popular estimation, this important occupation. Though it may not be fitting pupils specially to become "gentlemen" in the term of the tax-bill, it is preparing them to a certain extent to occupy an important position in the community. Education dignifies any calling. Agriculture coupled up with the usual training afforded by the High School will stimulate the academic work, and it in turn will be stimulated thereby.

It is not intended primarily to produce farmers by this training; nor is it expected that all those who have been brought up on the farm and take the course, will go back to the farm. The subject is placed on the programme as a part of the course of study suitable to a liberal education. It is suitable because it appeals to the pupil's experience.

Home Projects are an essential feature of the High School course in Agriculture, and in many cases with excellent results. Considerable latitude is allowed both teacher and pupil in making a selection. To carry out these projects with profit to the pupil, will require considerable individual instruction by the teacher and individual effort on the part of the pupil. From the very nature of the work, the pupil and teacher must become more intimately associated, and the pupil is sure to receive the individual inspiration, which to many people comes but once in life. The following Projects taken from Circular 13 (1) give a basis for selection.

Suggested Home Projects for the Lower School

On Gardening

(1) To take charge of the home vegetable garden or part of it.
(2) To establish, improve, or care for home lawns.
(3) To grow one or more vegetables, such as tomatoes, beets, corn, beans for canning.
(4) To grow one flower and one vegetable in a pupils' competition.
(5) To set out and care for a strawberry, raspberry, or asparagus bed.
(6) To set out and care for a row of currants or gooseberries.
(7) To establish a perennial flower border.
(8) To set out and train climbing rose, Boston ivy, or other climbers.
(9) To test two varieties of a vegetable, such as arranged for by the Schools' Division of the Experimental Union.
(10) To grow new kinds of vegetables.
(11) To improve the back yard with grass plots, flower borders, and climbers on the fences.
(12) To establish a wild flower garden at home.

On Fruit Growing, Nursery Work, etc.

(1) To renovate an old orchard, or part of it.
(2) To set out and care for one or more fruit trees or grapevines.
(3) To care for one or more trees by pruning, scraping, spraying, and cultivating.
(4) To experiment on thinning out fruit on heavily bearing tree.
(5) To produce one's own fruit trees by raising seedlings and grafting on roots or budding.
(6) To propagate currants, gooseberries and grape vines from cuttings.
(7) To raise shade trees from seeds and nuts, *e.g.*, horse-chestnuts, oaks, hickories, walnuts, maples, elms.
(8) To propagate ornamental shrubbery, such as privet, bush hydrangea, roses, etc., from cuttings.
(9) To buy ornamental shrubbery of one-year stock and care for it in nursery lines until large enough to set out.
(10) To get young evergreen and other tree seedlings from the woods and bring on in nursery lines to prepare for home planting.
(11) To get a colony of bees and learn to handle it.

On Production of Field Crops, Home Grown Seed, etc.

(1) To compare thick and thin seeding of some common field crop.
(2) To compare results from different dates of seeding.
(3) To compare yields from same weights of large and small seed.
(4) To compare yields resulting with different depths or different number of times of cultivation, say of corn.
(5) To compare yields resulting from uses of different mixtures of chemical fertilizers.
(6) To produce one's own mangel, turnip, or carrot seed.
(7) To test and introduce a new variety of grain, alfalfa, clover, potato or other crop, such as recommended by the experimental stations.
(8) To enter local competition in obtaining the best yields from one-tenth acre of corn, potatoes, turnips, etc.

On Crop and Live Stock Improvement

(1) Having joined the Canadian Seed Growers' Association, to commence practical seed selection and improvement.
(2) To enter one of the Field Crop Competitions organized by the Ontario Department of Agriculture.
(3) To undertake one of the experiments offered by the Experimental Union, comparing approved varieties of oats, barley, potatoes, etc.
(4) To commence the selection of the best hills of potatoes, best heads of corn, best heads of oats and grow crops from these.
(5) To purchase, plant, and care for choice seed from a leading seed grower for comparing with home-grown seed.
(6) To secure eggs of some improved strain of poultry (*e.g.*, O.A.C. Barred Rocks) and build up a pure flock.
(7) To make individual milk tests for the home dairy herd in order to find out which cows are most valuable.

On Farm Management and Improvement

(1) To make a complete valuation of the farm and all its equipment, buildings, fences, drains, machinery, live stock, feed, fields and orchards.
(2) To estimate the cost of producing the different crops grown, keeping accounts for each field.
(3) To estimate the cost of raising pigs, chickens, cattle, sheep or horses.
(4) To estimate the cost of producing milk and butter.
(5) To carry out a system of book-keeping for the farm for a year.
(6) To make a drainage survey of the farm with map showing location of old drains and new drains required.
(7) To test a scheme of cultivation for the eradication of weed pest in a field.
(8) To use split-log drag for improvement of roads about and on the farm.
(9) To make a survey of the home woods, estimating the amount of mature or spoiling wood available for lumber or fire wood and making plans for restoration or improvement.
(10) To conduct an experiment to find the results of following a system of rotation.

On Farm Mechanics, Home Carpentry, etc.

(1) To make utensils required on farm or in home, *e.g.*, wood-box, book-shelf, milk-stool, saw-horse, poultry feed boxes, butter worker.
(2) To put down cement sidewalks about home, making cement fence posts, water troughs, etc.
(3) To use farmer's hand forge and learn to make simple blacksmithing repairs.
(4) To build, repair, and readjust all farm gates.
(5) To repair barns and sheds, replacing broken windows, floors, partitions, steps, etc.
(6) To plan, make out bill for material, purchase, and build new poultry house, pig pen or shed.
(7) To build in new ventilators in stables.

One instance of a Home Project carried out in 1916, by a girl in the New Liskeard Continuation School, gives a good illustration of the nature of the work. But I wish to draw attention to the actual educational value of the study of those details necessary to the successful accomplishment of the problem. The details were all associated, necessarily so of course, in such a way as to advance the student in other subjects: business management, elementary science, bookkeeping, etc. But after all the element of profit is one which gives an Agricultural cast to the Project that must appeal to all.

"My home project was the raising of a colony of bees, and was decided on during the winter term of 1916.

"As I did not know anything about raising bees, a good deal of reading was necessary and I found the O.A.C. bulletins on the subject very helpful; 'The A, B, C and X, Y, Z of Bee Culture,' by Root; 'The Honey Bee,' by Dadant, and 'Beekeeping,' by E. F. Phillips, gave many useful pointers as to general work of all seasons.

"On February 22nd, 1916, I became a member of the Ontario Beekeepers' Association, and so received a monthly bee journal and reliable information as to crops, etc. Necessary bee supplies were then purchased from the Ham and Nott Supply Co.

"On May 13th, 1916, one eight-frame Langstroth hive, containing colony of bees was purchased from a local beekeeper, and moved to summer stand in good condition, the queen having been introduced last fall.

"First super was put on the colony May 24th, where the bees at once began to work.

"On July 4th, at 11.50 a swarm issued and clustered on a small bush a few yards from the stand, and with the help of a girl friend, also inexperienced, they were hived. On the first day they drew out comb of four Hoffman frames, made wax for another and began work in the super.

"On July 6th, 1916, I attended the demonstration held at the Rahn Bee and Honey Co.'s apiary, Haileybury. Mr. Rahn explained his method of raising queens and showed his special insulated hives, and many useful appliances—such as drone and queen traps and different types of feeders. He also explained his method of introducing queens."

"Mr. Ager demonstrated many points in handling bees, and Dr. Sladen, Dominion Agriculturist of Ottawa, gave an address on the nectar producing plants of Northern Ontario, stating that the fireweed, alsike clover, Canada thistle and golden rod were the chief plants of importance.

"On July 5th, 1916, I placed the second super on parent colony. On July 15th, 1916, an afterswarm issued from the parent colony, this was hived in a rough box, then I cut queen cells from parent colony, removed one frame of honey stores and returned the swarm July 22nd, 1916, first four sections of honey removed from parent colony, flavour and colour very good.

"August 5th, 1916, first honey taken from swarm.

"September 16th, 1916, last comb honey removed.

"November 4th, 1916, bees were examined, and I found a good supply of brood has been reared and stores are plentiful. (During the whole season no feeding was done as bees stored sufficient.)

"November 13th, 1916, the bees were put in the cellar with full width entrance space; this was screened with window screen wire so that bees cannot come out. The cellar was dark and well ventilated and the temperature was constant. This home project will be continued next year.

"Results are:—

(1) Some experience and pleasure.
(2) 90 lbs. section and 10 lbs. extracted honey. (Net profit of $19.41.)
(3) Two colonies of bees, in good condition.

"Statement of Receipts and Expenditure for this home project:—

Expenditure.

1916. Month. Date.		
Feb. 22	Ont. Beekeepers' Association membership fee	$1 00
	1-frame L. Hive	
	1-frame Super	
	2½ lbs. Med. Comb Foundation for section	
	5 lbs. Brood	12 18
	"Beekeeping," by E. F. Phillips	
	Bee-veil and smoker	
	250 Sections in flat	
	Postage and express	15
May 13	1 8-frame L. Hive and bees	6 50
July 1	7 Supers at 45 cents each	3 15
	Can of paint and Foundation wire	90
	1 Honey carrier with wire sides	75
	Total Expense	$24 63

Receipts and Estimated Value of Capital.

Dec.	(Capital)—2 colonies bees (parent colony and swarm)	$13 00
	(Receipts)—90 sections White Honey (75% No. 1) at 20 cents	18 00
	(Receipts)—10 lbs. extracted honey (light), at 15 cents	1 50
	(Capital)—Stock supplies on hand, as supers, wax, tools, etc., at 10% depreciation	11 54
	Total	$44 04
	Expense	24 63
	Profit	$19 41

WINNIFRED PLAYER.
New Liskeard."

Lower School Examination for Entrance into the Normal Schools and Faculties of Education, 1916

AGRICULTURE AND HORTICULTURE

NOTE.—*Five questions will constitute a full paper.*

1. (*a*) Describe the two classes of poultry known as the Asiatic and the European.
(*b*) Name the breeds belonging to each class.
(*c*) Describe the process of hatching chicks with an incubator.

2. (*a*) Give the life histories of any *two* of the following:—oyster-shell scale, tent caterpillar, codling moth.
(*b*) Describe the spray-mixture used to combat successfully each of the three insects, respectively, and tell *how* and *when* it should be applied.

3. (*a*) Show how the percentage of fat in milk may be accurately determined by the Babcock tester.
(*b*) What is the chief use of this test?
(*c*) How is milk pasteurized?

4. It is required to build a concrete cylindrical silo with wall 1 foot thick, inside diameter 9 feet, and height 21 feet. How many loads of gravel will be needed to build it, assuming that the cement and water occupy none of the space but enter the crevices of the gravel, and that the wagon box is 10 feet long, 3 feet wide, and 10 inches deep, inside measurements.

5. (*a*) Indicate the points of contrast between a good *dairy* type and a good *beef* type of cattle.
(*b*) Name three breeds of cattle that are called beef breeds and four that are called dairy breeds.
(*c*) Give the characteristics of each breed named.

6. (*a*) Make a diagram showing the various parts of a bee-hive.
(*b*) What is meant by (i) swarming, (ii) queen-excluder?
(*c*) Indicate the chief functions of (i) the queen, (ii) the drone, (iii) the worker.

7. (*a*) Point out the chief beneficial results to be derived from drainage of land.
(*b*) What are the physical characteristics of soil which especially requires tile-drainage?
(*c*) Describe the tile, and one good method of laying it.

Middle School Agriculture

Two High Schools—Arthur and Bowmanville—have undertaken and have carried on successfully all of the Middle School course in Agriculture. As is the case in the Lower School, this is a bonus subject which may be used, under certain conditions, in the Departmental Examination for Normal Entrance. It is not recognized at all in Matriculation. Latin may also be used as a bonus subject for Normal Entrance, and in addition it is accepted for Matriculation. As compared with Agriculture, Latin has, therefore, a great advantage, because many students, though taking the Normal Entrance course, wish to take the Latin, so as to have it count towards Matriculation, and thus take really two examinations at once. As two bonus subjects are not allowed at one examination, Agriculture cannot therefore be counted. Art may also be taken as a bonus subject for Normal Entrance. This, too, has an advantage over Agriculture, because Art is compulsory in the Lower School as part of the Normal Entrance course, while Agriculture is not; therefore all students who take part I of the Normal Entrance course while in the Lower School, are eligible and competent to take the Art of the Middle School, whereas, with regard to Agriculture, only those who have elected the subject in the Lower School may take it in the Middle School. Aside from the pure love of the subject there is, therefore, no inducement to the student to take it in the Middle School.

If the regulations respecting the requirements for a course of study were amended so as to place the Physics, Chemistry, and Agriculture of the Middle School in a group, giving the student permission to present any two for either Normal Entrance with Matriculation, or for Normal Entrance alone, there would be no difficulty in securing classes in this subject for the Middle School. In fact, as soon as qualified teachers are available, Agriculture might well be made obligatory on all students taking the teachers' course. This might raise the question as to whether the large city Collegiate Institutes could carry on the work, and also as to whether there ought not to be two kinds of teachers' certificates, the one applying to city schools, and the other to rural schools. In fact, we may yet reach the stage where certain Normal Schools shall be especially fitted to train teachers for rural schools and others for city schools.

The need for Agriculture as an essential part of the Course of Study for those who expect to teach in the rural schools requires little argument. To convince of the desirability of the subject as one of the list for Matriculation may, however, not be so easy. It is recognized by those who have had to do with the teaching of College students that it is not the list of subjects which the Matriculant presents for admission to the University, which ensures success afterwards in his college course,

but rather the methods of study which the student has pursued, and the training given him by his instructor. It is more a problem of *method* than one of *matter*; more *how* than *what*. What the college professor wants is an unspoiled freshman, who has been trained to think, and not the matured pedant, who has an overwhelming regard for the importance of the smattering he has in a long list of subjects written large on his matriculation certificate. As a subject requiring thought and judgment, Agriculture, in comparison with any other on the curriculum, can hold its own. It needs no apology. There is no subject so frequently requiring the application of that quality which comes under the term "gumption." If this is a desirable quality to develop, then Agriculture should have a place on the programme for college entrance. Boys brought up on the farm have abundantly held their own in the halls of learning, and it may be partly due to the training of the senses which they have had under the blue sky and in the green lanes and fields on the farm. They have also measured well up in a college course of study, tending more to gentility than to the sweat of the brow. Agriculture has to do with the training of the senses in a greater degree, perhaps, than has any other subject, and therefore might fairly lay claim to a place as an elective on a Matriculation programme.

Middle School Physics is not particularly productive of good results, especially for girls in this class. Some of them manage to pass the examinations, but the work is perfunctory because it is beyond the sphere of their experience. Especially for teachers, and for those who are not mechanically inclined, Agriculture has as many merits educationally, and is of as much importance practically as Middle School Physics. Elementary Physics is always interesting and worthy of a place on the programme, but this is cared for in the Lower School, and if the Lower School Physics were the only Physics which Matriculation students were required to take they would be at no disadvantage in their future college career. Some of the classes in Physics, which the student takes in his college course, are but a repetition of that covered in the Middle School of his High School Course. In fact it could scarcely be otherwise, because the High School course in Physics covers practically everything under the sun.—Heat, Light, Sound, Electricity, Magnetism, Properties of Matter and some Mechanics.

Middle School Examination for Entrance into the Normal Schools, 1916

AGRICULTURE AND HORTICULTURE

FIRST PAPER

1. (*a*) Outline the life history of any *one* of the following:—wheat rust, corn smut, black knot.
(*b*) Point out the best method of controlling each of these three diseases.
(*c*) State the composition of Bordeaux mixture and describe the method of making and applying it.

2. Give, with drawings, the life histories of any *two* of the following:—codling moth, cabbage butterfly, buffalo moth, June bug.

3. (*a*) Describe the work of the nodule-forming organisms which live in the roots of certain leguminous plants.
(*b*) Discuss the relation of these organisms to soil fertility.

4. (*a*) Give, as applied to bee-keeping, the meaning of the terms (i) swarming, (ii) queen-excluder, (iii) foul brood, (iv) foundation, (*v*) royal jelly.
(*b*) Outline the life history of the queen.

5. (*a*) Name the chemical elements necessary to plant life.
(*b*) From what chemical compounds are these derived?
(*c*) What is the special need for artificial fertilizers, and what are the three elements that such fertilizers are specially designed to supply?

6. (*a*) Describe the following kinds of soil:—alluvial soil, clay loam, sandy loam.
(*b*) What is meant by (i) mulching, (ii) dry farming, (iii) leaching?

SECOND PAPER

1. Describe the Babcock test for butter fat in cream. Give reasons for each step of the process.

2. Give the characteristics of each of the *two* chief types of swine, and name *two* breeds belonging to each type.

3. (*a*) Point out the characteristic features of any *two* of the following breeds of sheep:—Cotswold, Merino, Oxford Down, Dorset, Leicester.
(*b*) Point out the chief advantages and disadvantages of raising sheep on an ordinary Ontario farm with good land.
(*c*) Give a short description of a farm which would be especially adapted to the raising of sheep.

4. Discuss "rotation of crops" and its value to the farmer. Plan, giving reasons, a four-year rotation.

5. (*a*) What is meant by (i) pedigreed stock, (ii) herd book?
(*b*) What advantages may be derived from the use of pedigreed cattle as compared with grade cattle?

6. (*a*) Discuss the advantages and disadvantages of Statute Labour as a method of securing good roads.
(*b*) Give an account of the methods and aims of either of the following:—
(i) The Egg Circle.
(ii) The Beef Ring.

7. (*a*) What are the advantages and disadvantages of a market in a small town (i) to the town itself, (ii) to the surrounding country?
(*b*) In a town without a market what inducements might be held out to the farmer to secure his trade?

The Training of Teachers

In order to qualify to teach Agriculture in the High Schools, Collegiate Institutes, or Continuation Schools, the teacher must hold an Intermediate Certificate in Agriculture. This certificate is obtained on the completion of the Summer Course covering two consecutive summers at the Ontario Agricultural College, Guelph. To enter this course the applicant must hold a teacher's certificate qualifying him to teach Science in such a school, and should have had—though this is not essential—experience in teaching. This course runs concurrently with the course leading to an Elementary Certificate in Agriculture, and is adapted, as far as possible, to the needs of the High School teacher.

It was begun in 1913, with an attendance of 23. The following, so far, have been granted certificates:

1914.

John A. Bell.
Geo. A. Campbell.
Geo. A. Clark.
J. B. Dandeno, A.M., Ph.D.
James L. Mitchener, B.A.
Wm. J. Morrison, B.A.
Alex. R. McRitchie, B.A.
Alex. Pearson, B.A.
Edmund Pubsley, B.A.
Fred. Sine, M.A., B.Sc.
Arthur M. Woodley.
Wm. B. Wyndham, B.A.

1915.

Wm. Bowden.
Wm. G. Butson.
Edward J. Corkhill, B.A.
Robt. W. Fleming.
Chas. S. Gulston.
John P. Hume, B.A.
John A. Macdonald.
Geo. O. McMillan, M.A., B.Pæd.
Muriel A. Shook.
Geo. B. Spark, B.A.

1916.

John G. Adams, B.A.
Edwin T. Bell, B.A.
Geo. W. Bunton, B.A.
Geo. E. Copeland.
Isabella E. Dobbie.
Wm. Donaldson, B.A.
Clarence Elliott.
F. V. Elliott.
Hugh H. Graham, B.A.
Hugh J. Haviland, B.A.
Gideon A. Miller, M.A.
W. A. Porter.
Walter E. Shales, M.A.
Daniel E. Smith, B.A.
Christopher Summers.

Under an arrangement made in 1912, the Ontario Agricultural College, the Department of Education, and the Universities of the Province, provided a Course of Study leading to the Degree of B.Sc. in Agr. It is intended that, to a large extent, the teachers of Agriculture in the Secondary Schools of Ontario should be the holders of this degree. (See Syllabus of the Courses and Examinations, circular 47 A. Sept., 1912; pages 3, 4, 5, 6.)

Up to the present one man has received this Degree,—F. E. Foulds, in 1916. One man entered the third year of the Course in Sept., 1915. He enlisted in March, 1916, but was awarded his year. Mr. Foulds has also enlisted. So far, therefore, no teacher taking this course is available or in sight. Whether the course will, in the near future, become popular is very much in doubt, although, with the financial assistance offered during the course, and with the scope of privileges allowed in the teaching profession, it might be thought to be a very attractive course.

Those who hold Intermediate Certificates in Agriculture are somewhat uneasy with respect to the permanency of their certificates in view of the following regulation:—

"Until teachers with the qualifications prescribed in Regulation 7 (1) (a) (B.Sc. in Agr.) above are available, the Minister will accept the following as qualifications for the work in the Agricultural subjects of the Agricultural Department.

(a) The Degree of B.S.A., with a Second Class Certificate.

(b) An Intermediate Certificate in Agriculture.

(c) A certificate of having completed the first course for an Intermediate certificate, with an undertaking by the holder thereof to complete the second course in the following year."

It might be a good move to permit the holders of Intermediate certificates in Agriculture to become Specialists in Science and Agriculture providing they have (1) five years' experience in teaching, (2) a Degree in Arts, (3) a Science Specialist's certificate, and (4) that they have completed successfully a third summer session at the Ontario Agriculture College. And in order to keep up the supply of available teachers in Agriculture I should recommend that the holder of an Intermediate Certificate in Agriculture, who has five years' successful experience in teaching the subject in a High School, Collegiate Institute or Continuation School, shall be granted a permanent certificate to teach Agriculture in any of these schools.

Improved Accommodations

From time to time new school buildings are required for both primary and secondary schools, and in order to make the most of the opportunity when a new building is to be located, there should be an architect who is expert in school structures, and under the control of the Department of Education, and who would be available when required. Class rooms suitable for teaching Agriculture are not now a part of the accommodations, but when new schools are to be constructed this matter should have consideration.

Two High School buildings have recently been burned down and now is the time to consider the matter of class rooms in such schools for the future.

Rural schools are requiring new buildings constantly, but rural Boards of trustees have little or no knowledge of such matters. Problems of lighting, heating, ventilation and equipment are unfamiliar to them. If an expert were at the disposal of the Department of Education to plan, discuss and advise with boards, a new period of school building with standard requirements would be commenced.

An expert would save the country many thousands annually, and what is still more important healthful and comfortable accommodation for pupils would be ensured.

Consolidated schools will develop, though perhaps slowly, in Ontario, and expert information will be required in regard to building accommodation. A proposition is on foot now in Dufferin County for a consolidated school. If an expert were at hand valuable information would soon be available for those Boards of trustees concerned, enabling them to see the advantages of a modern building and to know the cost.

The cost of maintaining such an expert might be borne by the Boards and the Department of Education under an arrangement economical to both.

I earnestly recommend that such an expert be appointed and that he be easily available by the Inspectors of both primary and secondary schools.

Normal Schools

The Normal Schools have recently strengthened the Course of Study in Agriculture and Horticulture by giving more time on the programme for this work, by adding equipment especially suitable for demonstration and for laboratory operations, and by enlarging the grounds to be devoted to school gardens. Much remains yet to be done in the matter of providing equipment and laboratory facilities for individual work. The class-rooms which have been used in the past for Science classes, though useful for much of the work in Agriculture, are not altogether sufficient. When greenhouses are provided this situation will be very materially improved.

For many years to come the burden of the work, both professional and non-professional, of instruction to Second Class teachers will fall upon the Normal Schools, consequently provision should be made for individual laboratory work in smaller groups with suitable equipment and in suitable class-rooms.

In former years, even when the Normal School course occupied but a half year, a considerable amount of time was wasted in attempting instruction in non-professional subjects having little or no bearing upon the teacher's work thereafter in his own school. That may not be the case now, but it seems strange that time is still set apart for the non-professional phase of such subjects as Elementary Science, Algebra, Geometry, History, Literature, etc. These subjects are all

taught—and well taught—in the High School course; therefore one might reasonably suppose that the academic feature need not be included in the Normal School programme. Not so, however, with Agriculture, because it is not taken at all, with the exception of one school, in the Middle School of the High School course, and is not a required subject for "Normal Entrance." After the subject is made obligatory for Entrance to Normal Schools then the time could be lessened, and only the professional features given attention to.

The School Garden for Normal Schools

The garden problem is one which has several difficulties, and those concerned with the actual work of teaching and of arranging a programme for classes in the Normal Schools which will fit in with the regular programme of studies in other subjects have a heavy task. The Normal School garden will always be subject to public criticism not always considerate and fair. The biggest fish are not necessarily caught with the finest looking fishing rod and tackle, nor is the showiest school garden necessarily indicative of the best results. It is generally the opposite and is often made without knowledge or judgment. "Patience and Perseverance" should be the motto on the "wall" of the garden.

An arrangement is being made with Model Schools in connection with the older Normal Schools and with certain city schools located near the other Normal Schools, whereby class work will be done under the direction of a trained teacher of the Model (or city) school staff with his own pupils under the observation of the Normal School students. Under such an arrangement the teachers in training will receive what might be called professional instruction, and in the garden they will also receive some instruction in such Agricultural operations as have to do with the soils. The garden should be used as a sort of laboratory for the study of crops and soils especially during the season when outdoor work is possible. During the winter season the greenhouse should be used, and it must not be forgotten that this portion of the Normal School term forms a large proportion of the time.

All the Normal Schools—Toronto, Ottawa, London, Hamilton, Peterborough, Stratford, and North Bay, were visited once in the fall term of 1915 and once during the fall term of 1916.

The number of young men in attendance is not large, forming only about ten or fifteen per cent. of the total and this small proportion has become considerably less on account of the war. This has some direct bearing upon the promotion of Agriculture because the idea is as yet quite prevalent that Agriculture is a man's job, and the best results will not be attained unless the Agricultural classes are in charge of male teachers. Whether this is a correct view is not the chief concern now. The main point is that the lady teacher is a fact and is in charge. The situation, as it is, must be met, and so far the prospect is far from gloomy. It is even hopeful. Lady teachers of the right sort, who have had some training in Agriculture, are not only carrying on the work but are, in many instances, making a brilliant success of it.

After all there is no good reason why outdoor work, such as gardening, fruit growing, poultry keeping, dairying, beekeeping and the like, should not fall within the ambitions of a lady as much as factory work, counter work in a large departmental store, or even the making of munitions. The outdoor labour involved in farming is less monotonous and more healthful than the indoor work of factory or

office. Farming is, no doubt, hard work, but, with modern appliances and management, and with a suitable subdivision of the several phases of Agriculture, it is not necessarily so.

The training of teachers for Agriculture, therefore, in the Normal Schools may be regarded to a certain extent as a training of young women towards independence. When such teachers become managers of their own homes, as most of them will in the natural course of events, the training received and the knowledge gained in the subjects of Agriculture and Horticulture will then, in a great many cases, prove useful in the way of increasing their income, and also in the enlarged scope for enjoyment of life.

The Course of Study in Agriculture is not yet all that could be desired as some important topics are omitted, but the list cannot include all the topics within the range of Agriculture and must end somewhere. Beekeeping might be on the list and more work in soils, fertilizers, insecticides and fungicides, but it is not the intention to require the teacher of Agriculture to follow out slavishly any set programme. He is given a fairly free hand, within reasonable limits, to map out his work so as to produce the best results.

COURSE OF STUDY

Agriculture and Horticulture

The special object of the course in Agriculture is to prepare the teacher-in-training to train his pupils for the occupations of the farm and to broaden and deepen their sympathies with nature and rural life.

The course includes the following topics:

Dairying: Care of milk and butter; Pasteurization, churning, separating; the use of the Babcock test and the lactometer.

Poultry: Utility breeds; care of poultry; care, shipping, and marketing of eggs.

Field Crops: Identification of seeds; seed testing; corn judging; seed selection; cover crops; weed-seed impurities; simple classification of soils; principles and plans of drainage.

Horticulture: Pruning; spraying; grafting; packing and shipping fruit; care of garden and house plants; making of hot-bed.

Birds and Insects: Those of the most importance in their relation to Agriculture.

Experimental Plots: Preparation and planting to illustrate the benefits of seed selection; the rotation of crops; growing improved oats, barley, alfalfa.

School Gardens: The purpose of school gardens; the relation to nature study, agriculture, and horticulture; planning and plotting school gardens; work in the school garden by the teachers-in-training; observation and supervision of the work done by the pupils of the urban and rural Model Schools; care of the pupils' school gardens during the summer vacation; care of tools and machinery.

School Grounds: Planning; planting of trees, shrubs, and ornamental plants.

Home Projects: Direction of pupils' home work; inspection of records in pupils' note-books; inspection of home work by teachers.

The average number of periods per week, including both the academic work and the methodology, shall be as nearly as practicable 1½ periods (40 minutes) per week throughout the session.

The final standing of the teacher-in-training shall be determined by the staff on the combined results of his sessional records and the final examination. The maximum percentage shall be 50 for the sessional work and 50 for the final examination.

BOOKS OF REFERENCE:—

Waters: *The Essentials of Agriculture.*
Warren: Elements of Agriculture.
Burkett, Stevens and Hill: Agriculture for Beginners.

INSTRUCTION.—By special arrangement with the publishers, teachers-in-training may obtain at the Normal School copies of *The Essentials of Agriculture* at a reduced cost. The Principal will make an announcement on the subject as soon as the school opens.

SUMMER COURSES

Some years ago an arrangement was made between the Department of Education and the Ontario Agricultural College which provided for a spring course of ten weeks and also for a course covering two consecutive summer sessions of five weeks each. These were intended for teachers who expected to teach Agriculture in schools of Ontario. In 1914 the spring course was discontinued and now the courses are all offered during the summer vacation at a time when those who are engaged in teaching are free to attend.

If a sufficient number of duly qualified teachers apply for admission the following courses will be provided by the Department of Education in co-operation with the Ontario Agricultural College, Guelph, leading to certificates as follows:

(*a*) In Elementary Agriculture and Horticulture.
(*b*) Intermediate certificates in Agriculture.
(*c*) Certificates in Agriculture for teachers of Household Science.
(*d*) Certificates in Farm Mechanics.

All of the work pertaining to the above mentioned certificates is given at the Ontario Agricultural College, Guelph.

So far no candidates have applied for either the course in Farm Mechanics or that for the Agricultural and Household Science teachers. These two courses are expected to be given to teachers engaged to teach in schools having departments in these subjects. In 1917 there will be at least two such schools.

Qualifications for Admission

The following are the qualifications for admission to the different courses, but a student whose attendance, conduct, or sessional work is unsatisfactory to the principal may be dismissed from the course at any stage:

For the Intermediate Certificate in Agriculture

(1) (*a*) To the course for the Intermediate certificate in Agriculture may be admitted applicants who hold professional certificates qualifying them to teach in High or Continuation Schools and whose academic preparation has fitted them to teach Science therein.

For the Elementary Certificate in Agriculture

(*b*) To the course leading to an Elementary Certificate in Agriculture may be admitted applicants who hold professional certificates qualifying them to teach in the schools of the Provincial system.

For the Certificate in Agriculture for Teachers of Household Science

(*c*) To the special course in Agriculture may be admitted teachers who hold at least Ordinary certificates in Household Science.

For the Certificates in Farm Mechanics

(*d*) To the special course in Farm Mechanics may be admitted teachers who hold at least High School Assistants' or First Class certificates.

Applications for admission should be made to the Deputy Minister of Education, Toronto.

Registration

All applicants shall present themselves for registration not later than the first day of the session.

Tuition Fee

(1) All students duly admitted to a course under one of the provisions of Regulation 4 (1) above, who are actually and regularly engaged as teachers in the schools of the Provincial system, will be exempt from the payment of tuition fees.

(2) Other students duly admitted to a course under Regulation 4 (2) above shall each pay to the Principal on registration a tuition fee of $10.

Allowances

I. Agricultural Courses

(1) (*a*) The travelling expenses as defined in Regulation (3) (*a*) below, and in addition the sum of $20, being an allowance for the cost of board and lodging during the preceding Summer Session, will be paid to any teacher who satisfactorily completed a summer course leading to a certificate in Agriculture, on the report of the Inspector concerned that instruction in Agriculture, as prescribed by the Regulations, has been given by said teacher in his school throughout the school year following the course.

(*b*) No allowance for travelling expenses or for board and lodging will be made to students who reside in Guelph, or who live three miles or less therefrom.

(2) Application for the above allowances shall be made to the Deputy Minister of Education on any day in June of the year following the course at the Agricultural College, with receipts showing expenditures for travelling expenses, in the case of teachers of Public and Separate Schools, through the Inspector concerned, and in the case of teachers of High Schools or Continuation Schools directly to the Deputy Minister of Education.

(3) (*a*) The travelling expenses shall be those actually incurred by the teacher from and to his home or school as the Principal of the Summer School may report. No allowance will be made for meals, Pullman car seats, berths, or baggage transfers.

(*b*) In order to secure the allowance for tranvelling expenses provided for above, each student shall obtain from the ticket agent a standard certificate or a receipt for fare paid by boat or railway on the purchase of one first-class fare to Guelph, as the same may be. This certificate the student shall deposit with the Principal on registration.

INSTRUCTION.—The Principal of the Summer School shall, on receipt thereof, forward the railway certificates or receipts to the Department of Education, together with a certified list of the students and the points from which transportation expenses are claimed. These certificates, after being recorded, will be returned to the Principal before the close of the session.

II. Other Courses

(4) The tuition fee will be returned to any teacher who paid the said fee under the provisions of Regulation 7 (2) above, who satisfactorily completed a summer course leading to a certificate, who has taught the subject of said certificate throughout the school year following in one of the schools of the Provincial system, and who makes application for the return of said fee at the time and in the manner prescribed in (2) above.

Board and Lodging

9. (1) (*a*) Students who are admitted to the courses at the Agricultural College may obtain board and lodging in the College at Macdonald Hall for $20 for the course.

(*b*) Application for rooms must be made on or before June 15th. Each application must be accompanied by $5.00, which will be allowed on the board bill or will be returned in the case of illness or other unavoidable cause of absence.

(*c*) Rooms will be reserved in the order in which the applications therefor are received, and on the acceptance of the application a list will be sent of the necessary equipment and of the rules of residence.

(*d*) Teachers are advised to avail themselves of the opportunity of boarding in residence at the Agricultural College, as it will be found that association with other teachers from all over the Province is not the least valuable part of the course. Moreover, such residence will enable them to take full advantage of the evening lectures, evening work in the gardens, etc.

Certificates

15.—(1) The professional certificates granted by the Department of Education on the examinations will be Interim and valid for two years from the date of issue and renewable under conditions satisfactory to the Minister, provided the holder is otherwise qualified to teach in the Provincial Schools.

(3) On application to the Deputy Minister, Interim certificates will be made Permanent on the report of the Inspector or Inspectors concerned that the holder of such certificate has taught successfully the subjects thereof for at least two years in one or more of the Schools of the Provincial System.

The courses for Public School teachers were organized in 1911 and those for High School teachers in 1913. Each of these two courses consists of two parts covered in consecutive years and each session of this two-year course extends through a period of five weeks. The classes are carried on at the Ontario Agricultural College under the control and direction of the Department of Education.

The chief aim is to prepare teachers to give instruction in Elementary Agriculture in the schools of Ontario. Our system of education in Ontario has been, for several years, undergoing important changes, not only in subject matter, but also in method and in viewpoint. Book study has its place, but its place is not the whole field. The introduction of Natural Science into the schools has had much to do with the change in method, and it has had something to do also with the changed attitude toward the actual subject matter. When so many people are directly and indirectly concerned with Agriculture, in one way or another, it is reasonable to suppose that a system of education in any country would not be complete without a place for Agriculture. It may be a slow process to engraft the subject permanently into the curriculum of the schools of Ontario, but it is the aim of the Department of Education to do so as rapidly as public opinion will permit.

In order to make the instruction effective it is necessary to give pupils some practical exercises and demonstrations to illustrate the principles involved. The school garden can be used with advantage for this purpose, and it is expected that a properly managed school garden will take the place, to some extent, of a sort of laboratory, contributing to the advancement of the class instruction.

At the College, during the first year of the Elementary classes, instruction and practice are given in this subject. The gardens of the Macdonald School are made use of under an arrangement with the trustees of the school and the Horticulture Department of the College. This arrangement provides practice in attending a garden which has had a good start as well as practice in planting a garden.

It is expected that when teachers receive this training they will be able to manage gardens in their own schools. From year to year the number of schools is increased, and it is to be hoped that eventually all the public schools will be equipped with some sort of a garden.

The courses of training are necessarily short, but, as time goes on, and the subject is taken regularly in the High School, these short courses can become much more effective, for the work can then be more advanced, and the standard raised. At the present time there are about five hundred pupils taking the work in the High Schools and the number is rapidly increasing.

The High School teachers are, for the most part, science specialists and well qualified to profit to the utmost by the instruction they receive in Agriculture. They are all trained teachers and know how to make the most of the time and opportunity.

Owing to the fact that at present the subject has no standing as a matriculation subject, and is not required in the High Schools, its introduction will be necessarily very slow. There is no valid reason why Agriculture should not have consideration in the same way as other subjects on the examination scheme.

Outdoor Exercises

It very frequently happens that teachers, especially female teachers, fail in health and soon wear out. This is doubtless due in part to the indoor life which they live, and to the ordinary worry of school discipline and school work. Realizing this, provision is made during the summer courses at the Ontario Agricultural College for regular outdoor sports. This is easily worked out here because practically all the students board and room on the campus, and it is a simple matter for the students to assemble for outdoor games every evening. I am convinced that the health of the Summer School students is improved during these five weeks, notwithstanding the fact that serious study is carried on at the same time. But the chief advantage of this feature of the course is the results produced on both teacher and pupils after the teacher returns to the school. New games are learned and practiced, and the teachers have a splendid opportunity to become acquainted with one another. In all my experience I have seen no place so well suited to a work of this kind as the Ontario Agricultural College.

Summary of the Attendance

Year	Elementary				Intermediate				Total
	Part I		Part II.		Part I		Part II.		
	Men	Women	Men	Women	Men	Women	Men	Women	
1911..	8	75	1	16					100
1912..	16	65	2	23					106
1913..	14	64	5	36	*23	4			146
1914..	8	55	5	27	13	4	14		126
1915..	15	39	5	18	17	1	9	1	105
1916..	11	99	9	31	15	3	14	1	183

During the course in 1916 two interesting evening addresses were given to the students, one by Dr. Mills, former president of the College, and the other by Mr. Saunders, a bird student of London, Ont. Both these addresses were thoroughly enjoyed and appreciated by the students. Dr. Mills called attention in his address to three somewhat neglected phases of public school education—manners, slang and lack of respect for older folk.

One afternoon was used entirely for games and sports as a sort of Field Day, and this is no unimportant feature of the regular work.

*Seven of these were teachers from the Normal Schools.

APPENDIX F

PUBLIC LIBRARIES, LITERARY AND SCIENTIFIC INSTITUTIONS, ETC.

REPORT OF THE INSPECTOR OF PUBLIC LIBRARIES

To the Honourable R. A. Pyne, M.D., LL.D., M.P.P.,
Minister of Education for Ontario.

Sir,—I have the honour to submit the following report of the work of your Public Libraries Branch for 1916, and the statistics, etc., of the Public Libraries of the Province for 1915, also a statement of the grants paid in 1916 to Public Libraries, and to Historical, Literary and Scientific Societies.

First, permit me to express my appreciation of the encouragement accorded me and the sympathy shown toward the further development of the public library movement by yourself and the Deputy Minister during my first year as Inspector of Public Libraries. I wish to acknowledge the loyal spirit in which I have been assisted by the members of the staff of the Branch; they have been faithful to their duties, and the year's work with them has been decidedly pleasant.

I desire to record my gratitude to Mr. George H. Locke, Chief Librarian of the Toronto Public Library, for assistance given in connection with the library training school. Mr. Locke and several members of his staff showed a splendid spirit of co-operation, and did all in their power to make the school a success.

My thanks are due to the following librarians, library trustees and friends of the library cause for assistance in library institute work, the library school, and the *Ontario Library Review*: Dr. E. A. Hardy, Toronto; Mr. David Williams, Collingwood; Mr. J. Davis Barnett, Stratford; Mr. W. J. Sykes, Ottawa; the late Dr. C. C. James; Miss M. J. L. Black, Fort William; Mr. E. S. Caswell, Toronto; Mr. Fred. Landon, London; Miss Winifred Barnstead, Toronto; Miss Lillian Smith, Toronto; Miss Gertrude Boyle, Toronto; Miss Marion H. Baxter, London; Mr. H. B. Witton, Hamilton; Mr. Adam Hunter, Hamilton; Miss Caroline Wilson, Hamilton; Miss Norah Thomson, Owen Sound; Mr. Edgar M. Zavitz, Coldstream; Rev. Fr. Foley, London; Miss Marjorie Flanders, London; Miss Louise Gahan, London; Dr. H. W. Hill, London; and to the chiefs of departments and other assistants in the Toronto Public Library.

I am pleased to report notable progress for the year in the free public libraries of the Province. The association libraries as a whole have not been advancing, but I hope to note an improvement as soon as the results of 1916 are obtainable. The internal work of the Branch has been attended to with promptness and satisfaction. The Legislative grants payable in 1916 were paid early in the year to all libraries with the exception of those that did not comply with the regulations.

The features of the year's work that are worthy of special note are the publication of the new quarterly, the *Ontario Library Review and Book-Selection Guide*, the Short Course Library Training School, the book-selection institutes, and thorough library inspection. The phase of library work that received special

emphasis through the institutes and *Review* was book-selection, and I hope to hear of good results from this special effort. Comments on various matters that have received, and are receiving, special attention follow:

The Public Libraries in War Time

You will be pleased to hear that the Public Libraries of the Province have increased their expenditures by more than $100,000 since the last year before the war, and they have earned an increase of about ten per cent. in Legislative grants. The number of books read from public libraries by the people of Ontario shows an increase of nearly one and one-half million over the year 1913—an increase of about one-third. The librarians state that while "light" literature is nearly as popular as ever, there is a noticeable increase in the reading of more serious books. It is a matter of congratulation that, notwithstanding the increased taxation necessitated by pressing demands and large personal subscriptions for Patriotic and Red Cross purposes, the people of Ontario have increased their expenditures for library books by nearly twenty per cent. People should read, and there are but two ways of securing reading matter, one by individual purchase, the other by co-operative purchase. The individual gets more for his money by the co-operative plan, and by purchasing in this way his power to meet other obligations is increased. The public library is being looked upon more and more as an educational force, and it would appear that the increase of expenditure, and more than corresponding increase in the patronage of the libraries, bear an eloquent tribute to the increasing confidence that is growing in favour of free libraries.

Library Inspection

Since my appointment in April I have inspected carefully the following libraries: Windsor, Leamington, Walkerville, Amherstburg, Sarnia, Fort William, Port Arthur, North Bay, Brighton, Caledon, Don, Port Carling, Gravenhurst, Huntsville, Bracebridge, St. Thomas, Stratford, Kitchener, Grimsby and Owen Sound, and have visited Peterboro', Ottawa, Hamilton, and London. The attention demanded by other phases of the work of the Branch rendered it impossible to make the number of visits that I should like to have made. Written reports will be sent as soon as it will be possible to use the 1916 reports of the libraries as a basis of criticism for expenditure, patronage, etc. Library inspection is a kind of intensive work that should contribute largely toward raising the standard of the libraries. In the twenty-five libraries visited, twenty of them require a considerable amount of expert advice regarding the development of their libraries. Library inspection is the only kind of work that the Department can do to deal with each library according to its own peculiar situation and problem. Association and institute meetings and printed matter can never take up any library's problems in a specific way. Library inspection is more essential to the free libraries than to the association libraries. The latter are small and their problem is to secure a small fund and buy a few good books for a limited number of readers; they are not in a position to give modern public library service, and the kind of assistance through which they can benefit can be given by correspondence and the *Ontario Library Review*. The average free library is in a position to extend its usefulness along lines upon which expert advice and criticism are of the greatest value. With the very limited time available for library visits your Inspector is of the opinion that free libraries have the first claim on his time.

In the near future I hope to submit a suggested policy for library inspection, and a general method for reporting on visits and for advising library boards.

The matters for consideration in an inspection are as follows:—

(1) The building, its plan and arrangement.
(2) Departments: reference, circulating, children's, reading room.
(3) Books: Comment on the collection as a whole. Suggestions regarding certain classes; expenditure on books.
(4) Income. Expenditure; is it adequate and well proportioned?
(5) Cost of maintenance in relation to patronage, population, plant, etc.
(6) Patronage, its quality and quantity.
(7) Service.
(8) Classification.
(9) Catalogue.
(10) Equipment.
(11) Whether the board is meeting its problem by making adequate provision for the needs of the community.
(12) The librarian and staff.

The Ontario Library Review

The new library periodical and book-list was issued for the first time in July, 1916. Through this publication your Public Libraries Branch will be able to assist 95 per cent. of the libraries to select better books than they have been placing on their shelves. It furnishes a good source for selection. It also serves as a means of communication between the Department and the libraries, and as an instructor to all holding official connection with our libraries. This work contains editorial notes and comment, papers by prominent librarians and trustees, announcements of institutes, training school, etc., notes and news of libraries, selected lists of books on special subjects, and the *Book-Selection Guide,* which gives a list of about one hundred books quarterly, giving author, title, publisher, date and price, and a descriptive, and sometimes critical, note on each book listed. A copy of this publication is mailed to each member of the Legislature, to every librarian and library trustee of the public libraries in Ontario, librarians of Provincial and educational institutions, and a few friends of the library cause. It would be hard to estimate how much this publication will mean to the libraries of Ontario. By reason of a copy going to every trustee as well as to every librarian, every person holding official connection with a public library is reached with this publication. A large number of letters have been received commending the Minister for granting authority for the publication of this new quarterly.

Short Course Library Training School

A first-class type of short course training school was organized and directed by your Inspector of Public Libraries, and was held from September 11th to October 12th in the Dovercourt branch of the Toronto Public Library. The accommodation and facilities for practice work were furnished through the courtesy of the Toronto Public Library Board and the Chief Librarian, Mr. George H. Locke. The course as arranged conserved all of the limited time for the first essentials that are difficult to learn without a teacher. Persons without experience or library positions were not encouraged to take the course, as such a course is not a short-cut

to a library position for those without experience in the work. No fee was charged, and all necessary books and supplies were furnished free by the Department. The railway fares to and from Toronto were paid to all students who took the full course. No educational test was required, but candidates from town and city libraries were advised that they should have at least four years' high school training and a liberal education gained through general reading.

Success and satisfaction attended the school. Thirty-one students attended, thirty of whom had had library experience. Special credit is due to Miss Winifred Barnstead of Toronto, chief instructor of the school, for the satisfactory and efficient manner in which she arranged and conducted her part of the work.

Certificates were issued to all who were successful in the examinations. Each certificate stated that the student had attended the short course training school and had passed the examinations and practical tests. Three grades were assigned, "A," "B," and "C." Six students attained grade A; seven, grade B; and thirteen, grade C; five did not qualify for certificates.

Details regarding the school, including the names of the instructors and students, were published in the *Ontario Library Review,* and, therefore, do not require to be repeated in this report.

District Library Institutes

The first Library Institute was held ten years ago, and for the last seven years the whole Province has been divided into fifteen institute districts for the purpose of holding local annual meetings. Railway fare and hotel bill have been paid for one delegate from each library, to attend his institute meeting. The meetings have been interesting and have met with more or less success. No doubt the institutes have been helpful to a certain number, but I am free to confess that I have felt somewhat disappointed to find that the results have not proved more beneficial to the average libraries, and to the smaller libraries as a whole. The institutes cost approximately $1,500 a year, and are held at considerable labour on the part of the Public Libraries Branch. I am inclined to believe that the average library fails to put into practice the ideas gained at the institutes. This is probably due to the fact that in at least two-thirds of the libraries amateur management prevails, and that the whole library board of a small library is not influenced sufficiently by the one delegate who attends the institute.

The institutes held in 1916 were of a somewhat different type from those held formerly. Book-selection was the subject of instruction for the whole afternoon at fourteen of the meetings; the fifteenth was the Toronto district, where such instruction was not required. From all appearances, dealing with the one fundamental subject and dwelling upon it was the proper method of conducting an afternoon session. The results of the 1916 institutes can be tested as the invoices of books purchased by libraries reach this office with the annual reports. Some of the meetings were held late in the fall, and the libraries had little time to use the ideas gained in book-selection. Eight of the institutes were held in the summer. Some improvement might have been expected in their work. After examining a large number of invoices from various libraries I was surprised at not finding more improvement over the previous year. A certain improvement was shown by several libraries which might be attributed to the *Ontario Library Review.* I may mention that there were a large number of very small libraries who bought either no books or an inadequate supply in the year 1915, but carried over large cash balances to

1916. It was pointed out to them that their patrons were entitled to the books and that they were reducing their incomes by reason of their failure to expend more on books, which expenditure would bring them larger Legislative grants. The reports that have been received during 1917 show that, for eight out of ten of these libraries, the advice fell on deaf ears. I believe that institutes can do a great work, but we must throw greater weight into them by emphasizing essentials and supplementing the institute work through our bulletin, and through letters commenting on the work of each library, copies of the latter to be sent to each library trustee concerning the work of his own library. There are several of the prominent library workers in the Province deserving of commendation for addresses given to assist the Department in the 1916 institutes.

Regulations are required to govern District Library Institutes: recommendations will be submitted by your Inspector regarding this matter.

Travelling Libraries

The number of Travelling Libraries sent out in 1916 shows an increase of fifty per cent. over 1915, and still the circulation of these books should be much greater than it is at present. The whole collection of books requires to be classified, some withdrawals made, and all classes require to be made more representative. There is a large field for extending the usefulness of the Travelling Libraries in sparsely settled communities and other places where public libraries cannot be maintained. In 1916 nearly 2,000 new volumes were added to the collection. A larger number than that should be added each year for the next five or six years at the least to bring the collection to the strength and quality that should be worthy of such a library. The great need for this phase of our work is more room. The collection is crowded in a vault and three or four thousand books are packed in cases. More room is required so that the books can be assembled in book-stacks. The work of book-selection for Travelling Libraries will require considerable time, as every sub-section of the entire collection requires to be criticized in relation to what it *should* be. I hope that the day is not far distant when, through this, and the book-selection division, the Public Libraries Branch can furnish reading-lists to any residents of the Province who wish such information concerning books.

Mr. W. E. Smith deserves credit for the promptness with which he has filled all applications for Travelling Libraries. There have been no delays. His judgment in the selection of Travelling Library collections has been most commendable considering the collection from which the books were selected.

More room, a large number of better books, and new regulations are the desiderata in this division of our work.

Regulations are required to govern the management of the Travelling Library system, and may I suggest that a small charge be made for cases lent to Study Clubs or to any persons or organizations that do not propose to lend the books to all in their communities who wish to borrow.

Departmental Instructor and Demonstrator in Classifying and Cataloguing, Loan Systems, etc.

Miss Patricia Spereman visited eleven public libraries in the year 1916: Aylmer, Beachville, Exeter, Hanover, Mitchell, New Hamburg, Parkhill, Ridgetown, Wallaceburg, Seaforth, Zephyr. The shortest time given to one library was one week; the longest time, two months.

In May, the list of applicants for Miss Spereman's services was revised. Every library on the list was asked if it was prepared to purchase the materials for classifying and cataloguing before December 31st, 1916, and also if it would agree to have its librarian take the instruction and complete the work throughout the library according to the methods demonstrated. There were about thirty libraries represented on the list, and only five of them notified the office that they would be ready for Miss Spereman during 1916; the remainder of the libraries would not agree to prepare for her services at any particular time, and, therefore, were taken off the list.

No libraries are being listed for Miss Spereman's services until they agree to purchase supplies, take the instruction and continue the work. An attempt will be made to induce certain libraries to accept help in introducing the Decimal System of classifying and the modern method of cataloguing, and an approved loan system; efforts in this direction will be confined to the libraries where the need is greatest. In dealing with applications, libraries supported by public taxation should have first claim.

Progress of Free Public Libraries

In ten years the expenditure of free public libraries increased from $151,504 to $521,125, and the circulation of books from 1,807,122 to 4,436,995; the figures are for 1905 and 1915. The free libraries had $648,734 available for expenditure. They carried over cash balances to the total of $127,609. These figures speak for themselves.

Association Libraries

Unfortunately only a few of the association libraries have progressed during the last few years; on the whole they have not only been unprogressive, but they have lost ground. In 1906 we had 233 association libraries. We have 229 now. The expenditure of these institutions has dropped more than $14,000 in this time. The expenditure for 1906 was $47,152; for 1915 it was $32,790. The decline in these libraries is due to inefficient management, and chiefly to the habit of holding funds that should be expended on books. In 1915 the association libraries expended $32,790, and carried over cash balances amounting to $10,000; had the $10,000 been expended on books, $5,000 more would have been earned in Government grants for 1916. The law of diminishing returns has been at work. In 1906 these libraries had $55,000 to expend. Their failure to make use of all of their funds reduced their incomes for the following year, and they have suffered through the same kind of failure every year since that time. The year 1906 is chosen for convenience; the decline in these libraries began before that date.

These libraries, as a whole, have very little excuse for complaining of lack of funds when they do not expend more than seventy per cent. of their incomes. The disappointing feature of the library institutes, which were organized chiefly for the benefit of the smaller libraries, is that the association libraries have declined in spite of the help given by the institutes. Notwithstanding the work of the institutes and other means of assistance, these small libraries have been declining slowly but surely, although they have had the funds for gaining better results.

For several years the chief library workers of the Province have been desirous of working out a plan for securing free library service for small communities and rural districts. So far, a satisfactory solution has not been devised. Whatever unit may be decided upon for taxation for library purposes—the township, the

county, the school section, or something else, I doubt if efficient libraries will be realized if each police village, village, or unincorporated settlement is to act as a complete unit within itself. When small libraries are not in a position to employ a qualified librarian, there should be some sort of official connection with some library, institution or Governmental department that employs a qualified librarian. Regulations could be passed by the Department that would ensure better book-selection, and they could be made of such a nature that each association library would be required to buy books at the proper time, and within reasonable distance of their purchasing powers, but such regulations would smack too much of paternalism and would entail too much labour on the part of the Department.

The workers in the association libraries are nearly all volunteers, and there is a continual change in the personnel of small library boards. Therefore, it is most difficult to induce progress through educational and persuasive means. Your Public Libraries Branch proposes to make strenuous efforts to strengthen the standing of the association libraries. If they gain better reputations they will be more likely to convince their communities of the value of a library and thus pave the way for passing free library by-laws. A poorly managed association library is liable to poison the mind of the people of its district so that they will not feel disposed to favour a free library by-law.

At the present time association libraries receive grants from the Department on the same basis as free libraries. In unorganized settlements this is very necessary to ensure the lives of their small libraries, but in police villages, villages and towns, the association library with its privileges limited to those who pay a membership fee should not receive the same consideration as libraries that are free to all. A free public library is well within the reach of villages and towns, and the time has arrived when the Department might well take steps to bring about a change which will tend to convert village and town association libraries into free libraries. The amount realized by association libraries through membership fees is so slight that, in abolishing the fees, the loss would be so small, that very little financial assistance or taxation should be required from a police village, village or town to make an association library free to the people of its constituency. In unorganized settlements, the township extends over so much territory that it would be found difficult for people in a particular spot in a township to arrange for the passing of a by-law to give that particular spot alone free library service. A township scheme should provide for service for the whole township; in order to do this, four or five library stations would be required to serve the people of an average township; the difficulty of organizing an efficient system of this kind and of passing the necessary by-law is apparent; therefore the association library will be required for unorganized settlements for some time to come. During the year 1917, a further study of association libraries will be made with a view toward making recommendations for new legislation and regulations.

May I state once again that about fifteen per cent. of the association libraries are to be highly commended, but the unsatisfactory ones are overwhelmingly in the majority.

Carnegie Grants and Pledges

There are about ninety public library buildings in the Province of Ontario that were built through gifts from the Carnegie Corporation. On the whole, the municipalities that have received Carnegie buildings have done wonderfully well, and are doing commendable work, and have spent more than the amount of their

pledges. When application is made to the Carnegie Corporation for a grant of money for a library, a municipal council is asked to enter into an agreement to expend annually an amount of money for library purposes amounting to not less than ten per cent. of the Carnegie gift. This is not an unreasonable request. Ten per cent. is the minimum amount for which a Carnegie library can be maintained properly. Our best libraries expend annually for maintenance, from fifteen to twenty per cent. of the value of their buildings.

The Carnegie Corporation registered a complaint with the Department that about twelve of the ninety libraries had failed to expend the ten per cent. annually. The complaint also stated that a few libraries had failed to report on their expenditures when requested to do so. The Public Libraries Act permits a maximum rate of taxation for public library service, but requires no particular minimum rate. The Department gives liberal grants to the libraries, and renders very valuable services, and so long as a library board gets its constituency value for monies expended, it would appear to be an undue interference with local rights to attempt to enforce a mandatory minimum expenditure.

While the Department recognized that a pledge or contract made with any donor is a matter that rests entirely with the two parties to the contract, the Inspector of Public Libraries acted upon instructions and used persuasive means to encourage the few libraries referred to, first, toward keeping faith with the Corporation, and secondly, toward expending ten per cent. of the value of their buildings for the reason that, in maintaining a building at less than ten per cent. of its value, the two matters of the most vital concern (books and librarian's salary) would be the first to feel the effect of an inadequate expenditure. I am pleased to report that nearly two-thirds of the libraries complained of lived up to the pledge in the year 1916, notwithstanding the numerous enforced demands that are upon the people on account of the gigantic struggle in which our country is engaged.

Book-Selection by Public Libraries

Our best public libraries deserve commendation for their excellent work in book-selection. The average public library in the Province has not attended to this funadmental phase of its work in a methodical manner, and the collections of books in the majority of the libraries are not as representative as they should be. The *Book-Selection Guide* section of the *Ontario Library Review* will be a help in solving the problem of better book-selection. The libraries that do not employ qualified librarians are not in a position to do the best work in book-selection, and only a few of the libraries possess the various guides to selection. In compiling the *Book-Selection Guide*, a survey is made of current publications; the best are listed and described; the recommended list is made from the point of view of libraries expending about $500 a year for books.

With a few notable exceptions, the libraries are not in a good position to select the best books from the books of all time, the average library not being justified in maintaining a bibliographical library. We hope that your Public Libraries Branch will be so equipped in the near future that it can advise libraries in the purchase of books other than those of current publication, and in special classes of books in which libraries may desire recommendations.

The Public Libraries Act permits grants up to fifty per cent. of the amount expended on books (conditionally) to a maximum purchase of $400 in a year. The only condition laid down is that fiction must not be purchased beyond a

certain percentage of the amount expended upon other books. The Department has never deducted anything from its grant for inferior selection. The Legislative grant amounts to one-half of the expenditure made by those public libraries that do not exceed $400 in expenditure on books, and it seems to your Inspector that the Department would be justified in securing a regulation that would permit the Department to reduce its percentage in computing the grant for any library whose book-selection is below a reasonable standard. Such a regulation would have the tendency to improve the selection by the libraries as a whole. With the absence of regulations regarding the purchase of books (of which the Department is expected to pay one-half the cost) the best judgment will not be used by a large number of libraries. I am certain that a rule could be passed that would not be considered a hardship by any reasonable library board, and the results would be in the best interests of the supporters of the libraries and of the Department of Education.

Adequate Library Expenditure

The problem of providing adequate library service for a community should be the first consideration with a library board. There appears to be no problem so little understood by trustees, and it is doubtful if one board in fifty has ever tried to determine what must be expended for books, librarian's services, etc., and what accommodation is required to serve a given population. Neglect to make inquiry on what should be a most obvious question is not confined to library boards alone. Whether or not a library board feels disposed to make an adequate expenditure to meet its problem, it should know precisely what expenditure is required to meet the problem of serving a certain population according to modern library ideas. There are boards in the Province trying to serve a population on not more than fifty per cent. of what is required, and they wonder why they are not successful. There are a number of boards expending less than a normal amount annually for books considering the circulation. They wonder why their collections of books are becoming shabby and why the libraries are not increasing in popularity. There are a few isolated cases where the total expenditure of the library is abnormally large compared with the patronage of the library, and several where the patronage is small compared with the population.

Library boards require reports on the expenditure of their libraries in relation to their problems. Your Inspector feels constrained to devote as much time as possible in informing library boards regarding these important matters. In several instances during 1916 library boards have arranged to comply with the necessary conditions to meet their problems after being informed regarding the matter. In nearly every case it was only necessary to point out the desirable conditions, and the boards expressed satisfaction on being informed regarding the requirements to meet given cases. I trust that before long we will be able to publish in the *Ontario Library Review* a carefully considered paper on proportionate expenditure and necessary conditions to gain certain results.

Professional Training

More than two-thirds of the success of a library depends upon the librarian; therefore, professional training and regulations to ensure the appointment of the right type of librarians are essential for the best success of the libraries of the Province. When the modern ideas of the functions of libraries loomed up before the chief librarians of the English-speaking world, methods and means

were wanting. There was discovered a great need of study, of equipment, of inventive ingenuity, of individual and collective experience, of practical and philosophical attainments that had never been dreamed of before. These discoveries gave form to a conception of library science, of a department of study that is entitled to scientific rank by reason of the importance of its results, the precision of its methods, and the range of its details. The development of library science is quite marked. Librarians need no longer labour with crude methods. They are the inheritors of the accumulated experience, ideas, and methods that have been put into operation through individual and co-operative effort.

A short course library training school of one month is of some value, and of considerable value to those who have had experience in the use of modern methods, but efficiency on the part of librarians generally cannot be expected until a longer and more thorough course is established. A standard library school course covers one, and sometimes two academic years of about eight months each. No adequate course has been established as yet in Canada, and the need for something better than a one-month course is apparent. By reason of a longer course being approved in principle, a sum has been voted in the supplementary estimates to augment the sum already in the estimates for library school purposes. I trust that permission will be granted to organize a longer course.

I recommend for your consideration a plan of establishing a three months' course, the instruction to be confined entirely to the phases of librarianship that are difficult to master without a teacher. I believe that such a course, supplemented with hints for private study and practice, would further tend to raise the standard of librarianship in the Province, and would be highly appreciated by library boards and librarians. I recommend that a short course, similar to the one held in 1916, form the first part of the three months' course, in order to provide a one month's course for those who may desire it or cannot spend a greater length of time in Toronto. The candidates who wish a three months' course will remain for the second and third months, which time will be devoted to an elaboration, extension and more intensive study of the subjects and practice dealt with in the first month or shorter course.

A few of the librarians of the principal libraries of the Province have already expressed a desire to see such a school established. I recommend that the school be directed by the Department. The services of several specialists in the Province will be available for lectures and instruction. I have been assured by Mr. George H. Locke, Chief Librarian of the Toronto Public Library, that the Toronto Public Library Board and Chief Librarian will furnish ample facilities for practice work. Mr. Locke has been the first to suggest to a library board that a by-law or regulation be passed, making professional training compulsory on the part of appointees or candidates for positions. The following is a quotation from his annual report as presented to the Toronto Public Library Board for the year 1916:—

"One of the significant events of the year was the establishment of a Provincial Library Training School for those who were in service in the Province but who had not been trained for that service. This was planned by Mr. W. O. Carson, the lately appointed Inspector of Public Libraries for the Province, and we helped him by granting the use of the lecture-room of the Dovercourt Branch for the sessions of the School and our Branches for practice work. It was a great success from every standpoint and will develop no doubt into an established Library School with a longer term. If this were done I would recommend that

our Board co-operate with the Provincial Government so that candidates for positions in our Libraries would be accepted only after they had passed the examinations of this Provincial School as well as our own examination."

Other libraries will be likely to follow Toronto's lead by passing a similar regulation.

Qualifications and Certificates for Librarians

The time has come when librarians of our free libraries should possess qualifications and certificates. The usefulness of public libraries is determined to a greater extent by the personal and professional qualification of the librarian than by any other factor. A first-class library can not be realized without a first-class librarian.

People who are taxed for public library service should have reasonable assurance that they will receive a satisfactory kind of service, that the librarian and assistants will have qualifications in keeping with the class of library the people are taxed to maintain.

With an inefficient librarian, expenditures for public library purposes are, to a great extent, a waste.

Public library boards require the kind of assistance and guidance that certification of librarians would give. Every fair-minded library trustee would welcome a regulation that would limit the appointment of librarians and assistants to the right type of persons. A regulation for demanding certificates for librarians would raise the standard of efficiency of the libraries and increase their value as an educational force. It would give librarianship a higher professional standing, and tend to give the public library a higher place in public recognition.

The regulations that I would recommend to govern for the next few years would be of such a nature that no reasonable trustee or librarian could object to them. Present conditions would be considered and the regulations would be directed to bring about a higher standard of librarianship in a gradual and reasonable manner. Librarians at present engaged in the work would be given a reasonable length of time to qualify. Various standards of qualification would be adopted to provide a standard for libraries as classified according to the populations of municipalities where free libraries may be maintained. The educational and professional requirements for librarians of the smaller libraries would be nominal, and higher requirements would be demanded for larger libraries.

A certain proportion of the assistants in larger libraries should have certain professional qualifications. A qualified librarian should have an efficient staff. An inefficient staff means unsatisfactory service and waste. Large libraries can not afford to pay a staff all of whom are trained assistants; they require a certain number of assistants who are entitled to the rank of clerks. A certain proportion of the members of a staff should be qualified; the regulations should provide for this.

I have recommended a longer course library training school and provision for holding examinations and practical tests in librarianship. In the event of these recommendations being granted, and with the short course school, the Department will be in a position to provide the necessary means for librarians and assistants to obtain training to conform with any regulations that are likely to be passed for a while, also the opportunity of examination for other librarians and assistants, who have received training or attained professional knowledge through experience and study.

Grants for Special Libraries and Library Associations

Ontario Library Association.—A grant of $400 was paid to this association. The Ontario Library Association held a meeting in April, 1916, which proved both interesting and profitable to a large number of our libraries. Several of the members assisted your Public Libraries Branch with District Library Institute work, and rendered service in many ways to the library cause in the Province. Through this association, the library workers of Ontario have become acquainted with one another, and through it many have received their inspiration and their vision of the possibilities of public libraries. Every library in the Province should be identified with this organization.

Canadian Free Library for the Blind.—A grant of $500 was paid to this library. The librarian, Mr. Sherman C. Swift, reports progress for the year 1916. Five thousand nine hundred and ninety-eight books and pieces of music were on the shelves, and 9,440 volumes were circulated throughout the Dominion and Newfoundland. The gain in circulation was 180 volumes. Four hundred and seventy-seven borrowers were on the register—a gain of 51. A grant of $600 was received from the Toronto Public Library Board. The report tells of several activities pertaining to the welfare of the blind of Canada, which work was done partly by the library and partly through appeals made by the library.

The Reading Camp Association.—A grant of $2,000 was paid to this association. Mr. Alfred Fitzpatrick, B.A., superintendent, submitted a report of progress, in which he thanks the Department for the assistance given the association. The report shows that about forty camp schools were held, and literature was supplied to these and to dozens of other camps.

The instructors keep the men in camp well informed in regard to the principles involved in the great struggle in Europe, and they keep them abreast with the news of the war by means of bulletins, maps, etc. A large number of the men in the camps have enlisted since the war began, and the camp instructors have assisted in recruiting; one instructor reported that eighteen men in his camp had enlisted. The work of the association was extended overseas among Canadian lumbermen. Thirty-eight former instructors have responded to the Empire's call, two of whom, Thos. Garratt and P. F. Chidley, have made the supreme sacrifice; two others are prisoners in Germany. The war has caused a loss in income for the association, but Mr. Fitzpatrick expresses gratitude for the good subscriptions received which, he says, are handsome considering the extraordinary times in which we are living.

I present herewith a statement of the statistics of the Public Libraries of the Province and a statement of the grants paid to Historical, Literary and Scientfic Institutions.

I have the honour to be, Sir,

Your obedient servant,

W. O. Carson.

Inspector of Public Libraries.

Toronto, March, 1917.

FREE PUBLIC LIBRARIES

Statistics, 1915

No.	Library.	Population	Total Expenditure	Volumes in Library	Circulation	Legislative Grant paid in 1916
			$ c.			$ c.
1	Acton	1,803	395 60	3,475	6,866	98 26
2	Ailsa Craig	586	88 56	2,898	3,434	28 59
3	Amherstburg R.	2,356	1,955 53	4,502	16,836	70 94
4	Arnprior	4,300	246 54	3,382	3,762	89 87
5	Arthur R.	1,100	297 17	3,425	2,751	98 52
6	Aurora	2,600	481 75	3,937	6,671	60 28
7	Aylmer R.	2,300	852 01	7,866	13,932	227 77
8	Ayr R.	910	601 89	3,689	7,632	118 10
9	Barrie R.	7,008	1,605 72	7,193	32,157	177 72
10	Beamsville R.	1,100	495 47	4,822	3,609	76 78
11	Beeton	700	147 13	2,274	1,860	35 13
12	Belleville R.	12,620	2,392 30	8,468	31,062	260 00
13	Bothwell	650	188 23	2,797	3,400	42 91
14	Bracebridge R.	2,938	948 46	5,064	12,946	142 64
15	Brampton R.	4,060	1,314 43	7,199	28,502	260 00
16	Brantford R.	26,300	7,246 73	28,701	85,603	260 00
17	Brighton R.	1,919	271 01	3,859	4,522	49 80
18	Brockville R.	9,428	1,673 53	13,955	15,076	185 57
19	Brussels R.	840	480 04	4,325	5,856	68 85
20	Burk's Falls R.	1,050	321 61	3,137	4,591	66 22
21	Campbellford R.	3,100	941 55	3,262	15,471	90 15
22	Cardinal R.	1,200	231 48	2,656	4,495	36 12
23	Carleton Place R.	3,876	462 69	6,416	12,446	98 14
24	Chatham R.	12,863	3,215 29	9,478	39,950	260 00
25	Chesley R.	2,000	411 05	3,475	4,551	96 00
26	Clifford	1,000	170 70	4,640	3,935	36 37
27	Clinton R.	2,300	856 80	7,735	19,473	207 74
28	Collingwood R.	6,361	2,504 09	8,470	17,065	260 00
29	Cornwall R.	6,492	939 06	4,914	10,977	136 89
30	Delhi R.	900	183 74	2,113	2,449	51 88
31	Deseronto R.	2,221	391 24	6,597	8,062	69 84
32	Drayton R.	700	297 05	3,737	5,120	90 57
33	Dresden R.	1,500	448 71	1,584	6,229	23 75
34	Dundas R.	4,652	1,648 92	8,368	33,061	169 11
35	Durham R.	1,580	597 56	3,685	8,414	72 96
36	Elmira R.	2,300	* 3,220 30	4,241	6,690	225 48
37	Elora R.	1,220	723 01	8,052	7,152	129 59
38	Erin	526	150 94	2,819	4,396	53 75
39	Essex R.	1,385	721 35	3,307	6,299	93 08
40	Exeter R.	1,608	772 39	4,869	11,094	49 88
41	Fergus R.	1,700	1,103 88	5,968	10,080	150 86
42	Forest R.	1,495	625 12	4,100	11,597	79 10
43	Fort Frances R.	3,000	1,335 26	2,133	10,066	217 42
44	Fort William R.	20,853	*16,265 38	7,632	89,557	260 00
45	Galt R.	12,000	3,844 49	9,099	46,720	260 00
46	Gananoque R.	3,684	972 97	5,145	17,228	241 07
47	Garden Island	80	31 70	5,220	.....	.....
48	Georgtown R.	2,000	828 77	3,473	9,424	137 25
49	Glencoe	950	136 27	2,857	2,318	15 00
50	Goderich R.	4,676	1,160 48	5,553	19,672	155 70
51	Grand Valley R.	761	407 46	3,349	4,366	71 81
52	Gravenhurst	2,200	80 28	2,731	1,398	18 92
53	Grimsby R.	2,000	1,462 48	3,869	17,796	95 17
54	Guelph R.	16,735	4,584 43	17,404	68,000	260 00
55	Hagersville R.	1,200	267 10	2,352	1,255	77 77
56	Hamilton R.	100,461	*99,766 70	54,306	363,012	260 00
57	Hanover R.	3,218	663 76	2,672	10,329	159 24
58	Harriston R.	1,490	324 02	3,319	10,750	131 92
59	Hensall R.	800	349 77	1,643	6,937	90 54

FREE PUBLIC LIBRARIES—Continued

Statistics, 1915

No.	Library	Population	Total Expenditure	Volumes in Library	Circulation	Legislative Grant paid in 1916
			$ c.			$ c.
60	Hespeler ..... R.	2,740	458 43	4,629	8,221	77 20
61	Ingersoll ..... R.	5,200	1,329 00	5,708	17,780	195 07
62	Kemptville ..... R.	1,160	458 89	3,674	9,140	100 89
63	Kenora ..... R.	5,000	1,545 38	4,850	12,362	137 78
64	Kincardine ..... R.	2,368	624 02	4,402	7,686	94 44
65	Kingsville ..... R.	1,742	484 94	2,942	11,362	62 46
66	Kintore ..... R.	.....	141 19	1,623	1,172	63 24
67	Kitchener ..... R.	19,266	*15,833 05	14,860	43,695	260 00
68	Lakefield ..... R.	1,337	188 93	2,056	3,648	92 42
69	Lanark	696	184 56	1,987	4,648	47 79
70	Lancaster	700	174 53	4,821	1,700	37 61
71	Leamington ..... R.	3,300	1,111 27	4,252	23,634	176 36
72	Lindsay ..... R.	7,672	2,077 09	6,595	22,640	260 00
73	Listowel ..... R.	2,600	552 11	4,449	9,220	67 92
74	Little Britain ..... R.	300	341 45	2,737	1,169	20 00
75	London ..... R.	58,055	15,030 10	39,277	206,981	260 00
76	London (Branch) ..... R.	.....	*2,108 91	2,106	297	203 47
77	Lucknow ..... R.	1,000	424 91	3,187	5,454	163 05
78	Markdale ..... R.	1,000	358 95	3,395	4,823	104 87
79	Merrickville	1,000	160 15	3,567	2,398	15 00
80	Merritton	2,165	134 83	2,525	7,008	18 71
81	Midland ..... R.	6,375	1,646 12	6,564	35,300	79 44
82	Millbrook ..... R.	830	348 40	2,971	7,723	103 72
83	Milverton ..... R.	895	294 36	2,508	2,921	49 97
84	Mimico ..... R.	1,900	1,440 26	1,818	10,294	211 30
85	Mitchell ..... R.	1,706	1,146 27	5,647	7,687	70 46
86	Mount Forest ..... R.	2,000	783 71	4,248	17,262	83 75
87	New Hamburg	1,612	141 04	4,040	9,033	45 40
88	New Liskeard ..... R.	2,400	1,329 82	3,474	9,715	171 65
89	Newmarket ..... R.	3,604	622 00	4,576	11,719	107 58
90	Niagara Falls ..... R.	12,000	3,285 02	12,767	47,153	250 00
91	North Bay ..... R.	9,855	2,938 31	4,553	26,843	260 00
92	Oakwood	270	110 35	2,032	1,001	20 83
93	Orangeville ..... R	2,468	1,280 67	6,454	15,844	244 18
94	Orillia ..... R.	7,400	1,844 62	5,847	25,461	240 18
95	Oshawa ..... R.	8,900	1,441 53	4,415	21,480	207 17
96	Ottawa ..... R.	100,163	25,889 27	51,929	244,792	260 00
97	Ottawa (Branch) ..... R.	.....	.....	2,348	12,825	139 43
98	Otterville	500	128 34	1,783	2,952	54 62
99	Owen Sound ..... R.	12,256	2,662 95	6,411	35,833	260 00
100	Paisley ..... R.	775	358 36	5,644	7,936	89 43
101	Palmerston ..... R.	2,000	828 54	2,875	7,407	51 09
102	Paris ..... R.	4,383	1,270 70	10,589	15,603	156 52
103	Parkhill ..... R.	1,500	180 83	3,004	2,250	39 37
104	Parry Sound	4,000	431 78	3,235	7,765	45 00
105	Pembroke ..... R.	7,721	1,792 33	3,757	17,851	260 00
106	Penetanguishene ..... R.	4,000	1,044 65	6,164	12,350	173 76
107	Perth ..... R.	3,650	951 73	4,070	15,890	64 99
108	Peterborough ..... R.	20,426	5,167 71	13,293	56,091	260 00
109	Picton ..... R.	3,500	1,655 28	6,708	20,840	260 00
110	Port Arthur ..... R.	14,307	6,769 36	12,354	77,711	260 00
111	Port Carling ..... R.	327	184 28	2,398	2,149	53 11
112	Port Colborne	No Report				
113	Port Elgin ..... R.	1,500	691 74	4,682	9,670	71 62
114	Port Hope ..... R.	4,700	1,380 80	6,700	17,160	255 38
115	Prescott ..... R.	2,919	465 72	6,344	10,322	72 01
116	Preston ..... R.	4,600	1,178 12	8,726	18,080	147 36
117	Renfrew ..... R.	4,278	739 03	2,849	9,048	117 70
118	Richmond Hill ..... R.	930	282 04	4,331	6,772	74 04

FREE PUBLIC LIBRARIES—Concluded

Statistics, 1915

No.	Library	Population	Total Expenditure	Volumes in Library	Circulation	Legislative Grant paid in 1916
			$ c.			$ c.
119	Ridgeway .....R.	700	140 97	2,369	2,057	29 82
120	St. Catharines .....R.	17,880	3,830 08	8,444	36,549	217 80
121	St. Mary's .....R.	4,000	1,099 89	8,428	21,691	172 38
122	St. Thomas .....R.	17,027	3,391 18	14,784	67,922	260 00
123	Sarnia .....R.	11,548	3,229 23	9,559	44,027	260 00
124	Sault Ste. Marie .....R.	15,000	1,978 43	5,080	32,794	219 78
125	Seaforth .....R.	1,925	711 09	6,570	15,087	126 22
126	Shelburne .....R.	1,100	596 77	3,966	6,786	72 66
127	Simcoe .....R.	4,127	1,459 88	8,828	19,600	260 00
128	Smith's Falls .....R.	6,138	1,550 15	6,173	22,562	205 46
129	Stayner	1,009	88 55	2,248	3,468	19 86
130	Stirling .....R.	850	783 27	1,758	4,037	74 54
131	Stouffville .....R.	1,060	359 33	5,524	10,096	106 87
132	Stratford .....R.	17,081	2,501 03	14,061	55,183	260 00
133	Streetsville .....R.	600	216 78	2,819	6,022	85 94
134	Sundridge .....R.	420	66 57	850	1,110	22 24
135	Sutton West .....R.	800	190 81	1,520	6,118	84 30
136	Tara .....R.	565	237 53	1,672	4,203	36 57
137	Thorold .....R.	4,710	1,090 64	6,176	7,266	86 21
138	Tillsonburg .....R.	3,000	2,353 49	4,041	15,916	197 60
139	Toronto, Church St. ...R.	470,144	17,389 60	57,819	98,647	260 00
140	" The Beaches ....R.	.....	9,834 91	5,076	61,278	228 79
141	" College St. .....R.	.....	82,557 70	113,934	430,737	260 00
142	" Deer Park	.....	5,636 62	7,017	41,552	233 94
143	" Dovercourt .....R.	.....	16,149 23	11,613	177,789	260 00
144	" Earlscourt .....R.	.....	6,562 66	4,075	38,734	220 57
145	" Eastern	.....	5,786 85	2,411	17,727	211 89
146	" Queen & Lisgar.R.	.....	5,938 03	14,460	61,978	259 27
147	" Municipal	.....	3,134 69	996	7,492	90 92
148	" Northern .....R.	.....	5,353 80	5,244	25,295	213 30
149	" Riverdale .....R.	.....	10,183 01	14,058	152,237	260 00
150	" Western .....R.	.....	5,532 10	9,393	68,804	232 50
151	" Wychwood .....R.	.....	3,087 50	5,017	23,537	218 59
152	" Yorkville .....R.	.....	5,266 28	11,480	62,378	260 00
153	Trenton	No Report				
154	Uxbridge .....R.	1,800	498 92	6,577	10,155	70 34
155	Walkerton .....R.	2,950	1,022 22	4,132	8,792	119 28
156	Walkerville .....R.	5,001	2,933 45	8,488	32,687	260 00
157	Wallaceburg .....R.	4,107	1,556 63	7,114	13,634	254 77
158	Waterford	1,140	71 25	1,229	2,343	10 00
159	Waterloo .....R.	4,956	1,749 87	10,662	20,455	260 00
160	Watford .....R.	1,215	461 15	4,067	5,918	93 07
161	Weston .....R.	2,186	1,636 08	4,040	14,508	184 54
162	Whitby .....R.	2,845	1,254 92	3,274	11,050	107 42
163	Windsor .....R.	24,162	6,040 21	22,345	110,180	260 00
164	Wingham .....R.	2,500	903 95	5,731	11,188	259 98
165	Woodstock .....R.	10,084	2,988 10	11,038	59,122	260 00
166	Wroxeter	350	189 35	5,404	1,991	46 96
		.....	521,125 43	1,215,525	4,436,995	23,289 74

*Expenditure reported contains a substantial sum for extraordinary expenditure for Elmira, Fort William, Hamilton, Kitchener, London East Branch, and Toronto.

Libraries with Reading rooms are marked "R."

Population given is that furnished by the libraries, except where error was discovered.

ASSOCIATION PUBLIC LIBRARIES

Statistics, 1915

No.	Library	Population	Total Expenditure	Volumes in Library	Circulation	Legislative Grant paid in 1916
			$ c.			$ c.
1	Admaston	1,706	18 75	1,499	875	5 00
2	Alma	360	29 00	1,485	1,402	10 00
3	Almonte R.	2,700	159 43	4,175	3,990	41 01
4	Angus	No Report				
5	Alton	700	41 85	4,929	4,058	10 00
6	Arkona R.	425	116 04	2,625	1,300	26 87
7	Assiginack	850	.....	271	.....	10 00
8	Athens	768	125 03	1,400	1,271	40 91
9	Atwood	600	65 28	1,250	1,192	20 35
10	Auburn R.	250	4 41	1,533	1,646	43 92
11	Badjeros R.	.....	30 40	680	132	10 00
12	Bath R.	366	195 01	1,130	4,246	33 92
13	Bayfield	400	104 67	215	644	54 72
14	Bayham	.....	13 02	681	43	10 00
15	Baysville	141	50 41	745	1,073	17 12
16	Beachville	500	113 53	1,770	1,371	39 65
17	Beaverton R.	1,050	194 36	1,755	1,720	27 62
18	Beechwood	1,070	213 44	694	823	115 58
19	Belmont R.	400	100 36	1,454	2,020	39 73
20	Belwood	195	118 12	2,467	2,231	52 59
21	Blenheim R.	1,450	442 27	5,109	12,300	106 93
22	Bloomfield	800	60 55	1,513	1,225	10 00
23	Blyth	720	124 95	2,505	1,332	14 63
24	Bobcaygeon R.	953	220 33	3,157	2,808	74 07
25	Bolton	No Report				
26	Bowmanville R.	3,500	258 99	4,360	4,637	42 22
27	Bridgeburg	2,110	189 65	2,518	4,685	57 88
28	Brigden	No Report				
29	Brooklin	1,755	150 99	3,118	2,931	19 29
30	Brownsville	250	178 12	1,032	3,103	54 25
31	Brucefield	258	107 45	1,860	2,783	38 17
32	Burgessville	200	178 77	802	1,283	33 91
33	Burlington R.	2,200	333 41	3,989	2,398	51 97
34	Burnstown	80	14 40	901	421	5 00
35	Caledon	500	110 26	3,018	1,251	36 38
36	Cambray	186	106 50	1,971	1,813	40 75
37	Canfield	151	36 05	907	822	10 00
38	Cannington	975	95 83	2,498	3,004	26 89
39	Cargill	500	253 10	3,214	3,600	88 47
40	Cayuga	800	146 62	1,851	1,011	23 90
41	Chatsworth	370	55 02	3,187	5,462	10 00
42	Cheapside	90	67 11	2,238	907	24 94
43	Chesterville	No Report				
44	Clarksburg R.	600	248 05	1,298	1,091	58 25
45	Claremont	375	103 19	2,483	2,035	48 38
46	Claude	150	45 07	3,534	523	25 07
47	Cobourg R.	5,241	635 87	4,919	17,069	136 72
48	Colborne R.	1,000	72 95	2,108	860	18 00
49	Coldstream R.	100	168 61	1,908	2,390	72 24
50	Coldwater	320	71 07	1,977	4,038	14 67
51	Comber R.	600	205 46	3,018	4,742	57 28
52	Copleston	150	71 50	1,401	912	15 00
53	Delta	400	79 13	677	1,116	33 12
54	Depot Harbour	800	17 85	1,023	852	.....
55	Don	200	85 06	1,511	421	28 66
56	Dorchester	500	101 44	1,755	2,156	21 00
57	Drumbo	500	136 23	2,488	3,040	52 74
58	Duart	180	64 40	2,233	1,079	10 00
59	Dungannon	.....	95 46	2,366	1,726	25 60

ASSOCIATION PUBLIC LIBRARIES—Continued

Statistics, 1915

No.	Library	Population	Total Expenditure	Volumes in Library	Circulation	Legislative Grant paid in 1916
			$ c.			$ c.
60	Dunnville	3,300	458 51	4,195	12,397	142 50
61	Elmvale	.....	116 84	2,467	2,812	46 08
62	Elmwood	450	104 64	1,422	782	33 22
63	Embro R.	500	198 92	4,661	4,016	31 89
64	Emo	.....	93 59	165	.....	47 50
65	Emsdale	No Report				
66	Ennotville	780	152 43	4,132	1,554	62 30
67	Ethel	.....	34 60	1,657	4,392	10 00
68	Fenelon Falls R.	1,025	263 95	4,877	3,436	36 84
69	Flesherton R.	423	82 30	1,112	1,779	17 97
70	Fonthill R.	700	144 81	3,766	4,114	48 93
71	Fordwich	R eport				
72	Forester's Falls	.....	88 44	1,208	1,074	35 11
73	Fort Erie	1,472	221 62	3,815	7,038	34 26
74	Frankford R.	700	243 27	939	1,561	56 87
75	Fullarton R.	186	54 33	383	364	17 63
76	Glamis	.....	84 59	933	920	20 01
77	Glanworth	50	73 37	335	932	19 26
78	Glen Allan	200	33 12	1,304	.....	.....
79	Glen Morris R.	400	103 20	2,863	608	22 28
80	Gore Bay R.	700	147 00	1,502	2,682	15 00
81	Gore's Landing	212	32 18	1,529	995	5 00
82	Gorrie	No Report				
83	Grafton R.	400	116 32	905	1,520	47 98
84	Haileybury	No Report				
85	Haliburton	983	121 95	1,655	1,499	35 27
86	Harrietsville	.....	127 22	394	1,269	45 08
87	Harrington	200	151 07	1,761	1,149	47 01
88	Harrow R.	2,648	215 11	1,669	2,909	74 82
89	Hastings	825	44 32	1,220	2,949	10 00
90	Hawkesville	250	25 45	925	513	5 00
91	Hepworth	No Report				
92	Highland Creek	350	47 97	1,779	343	14 20
93	Hillsdale	400	73 68	1,724	1,382	22 00
94	Hillview	315	22 32	427	224	10 00
95	Holstein	300	77 58	2,081	2,498	18 11
96	Honeywood	100	27 00	737	687	10 00
97	Huntsville R.	2,500	280 04	4,100	6,144	67 82
88	Inwood	.....	138 27	1,518	1,043	53 90
99	Iroquois	800	109 30	1,747	3,000	22 12
100	Islington	1,768	141 70	2,710	2,929	53 36
101	Jarvis	520	114 76	3,570	1,469	23 82
102	Kars	200	64 70	1,575	729	13 58
103	Kemble	70	141 52	1,295	1,411	25 15
104	Kingston R.	22,000	2,398 16	7,455	30,650	260 00
105	Kinmount	450	81 49	2,078	3,042	16 65
106	Kirkfield	160	102 54	2,562	1,525	32 42
107	Kirkton	180	79 97	358	1,002	35 11
108	Komoka	300	105 17	1,233	800	31 39
109	Lake Charles	213	6 05	2,419	1,641	.....
110	Lefroy	.....	53 94	886	1,811	13 53
111	Linwood	450	35 00	811	586	10 00
112	Lucan	Reorganized in 1916				
113	Lyn R.	400	108 11	670	1,125	22 95
114	Madoc	1,100	106 72	3,011	2.002	16 90
115	Mandamin	200	149 21	947	1,562	64 69
116	Manilla	202	250 97	4,591	1,831	76 60
117	Manotick	No Repor				
118	Maple	250	25 00	800	.....	15 00
119	Marksville	300	31 50	960	762	5 00

ASSOCIATION PUBLIC LIBRARIES—Continued

Statistics, 1915

No.	Library	Population	Total Expenditure	Volumes in Library	Circulation	Legislative Grant paid in 1916
			$ c.			$ c.
120	Martintown ....R.	600	199 14	653	3,070	33 70
121	Meaford ....R.	3,000	746 44	4,332	8,573	88 80
122	Melbourne	350	110 50	1,252	1,324	24 48
123	Metcalfe	460	197 01	1,091	2,309	68 43
124	Mildmay	980	112 33	2,542	1,296	29 37
125	Millgrove	.....	49 24	783	1,096	34 26
126	Milton ....R.	2,053	219 81	4,684	4,909	52 30
127	Minden	300	95 36	1,720	1,391	27 40
128	Monkton	350	34 86	1,416	727	10 00
129	Mono Centre	62	40 96	763	701	25 77
130	Mono Mills	.....	31 88	831	560	15 00
131	Mono Road	.....	10 10	.....	.....	5 00
132	Morrisburg ....R.	1,600	322 58	3,311	4,859	73 04
133	Morriston	.....	38 25	1,387	912	10 72
134	Mount Albert ....R.	550	163 04	1,116	2,400	48 14
135	Mount Brydges	400	106 00	1,176	954	31 52
136	Nanticoke	130	25 00	2,202	1,138	10 00
137	Napanee ....R.	3,000	942 08	7,759	12,108	175 42
138	Napier	.....	119 05	413	810	28 42
139	Newburg ....R.	486	127 94	2,226	759	46 25
140	Newbury	380	88 45	1,168	4,951	33 31
141	New Dundee ....R.	330	72 10	1,038	1,571	37 43
142	Newington ....R.	305	42 30	1,092	830	14 70
143	Niagara	1,642	332 78	7,267	8,100	109 54
144	Norland	276	116 00	1,037	1,674	11 89
145	North Cobalt	1,700	94 82	399	.....	20 00
146	North Gower	400	120 56	2,226	2,634	19 48
147	Norwich ....R.	1,200	286 05	3,344	11,528	81 38
148	Norwood ....R.	826	129 96	2,518	2,046	29 40
149	Oakville ....R.	2,695	685 75	5,335	8,373	110 44
150	Odessa ....R.	700	118 15	1,401	3,375	39 45
151	Omemee ....R.	600	251 43	1,113	1,345	38 60
152	Orono	550	4 68	1,633	.....	10 00
153	Pakenham	450	66 82	853	956	10 00
154	Parkhead	.....	85 20	262	675	39 26
155	Pickering	470	116 89	1,819	2,259	38 11
156	Pinkerton	90	99 55	2,077	1,373	28 12
157	Plattsville ....R.	550	205 31	1,914	3,152	63 27
158	Plympton	.....	121 69	1,046	1,686	40 55
159	Point Edward	900	113 72	3,913	2,299	20 67
160	Port Credit	1,400	188 25	2,565	3,364	48 58
161	Port Dover ....R.	1,150	189 54	1,636	4,982	55 81
162	Port Perry ....R.	1,200	386 21	2,161	3,145	142 28
163	Port Rowan ....R.	720	86 80	1,890	1,456	25 68
164	Port Stanley	840	180 52	1,962	2,360	41 36
165	Powassan	650	74 73	338	569	20 00
166	Princeton	Report returned to Library for correction				
167	Queensville	450	119 21	2,764	1,400	44 56
168	Rainy River	No Report				
169	Ridgetown ....R.	2,000	241 05	4,866	4,007	76 96
170	Ripley	650	58 05	2,488	2,296	15 00
171	Riversdale	400	110 10	1,609	1,640	20 00
172	Rodney	800	52 68	670	396	22 87
173	Romney	1,479	123 41	3,489	1,501	54 62
174	Runnymede ....R.	3,500	133 29	1,498	3,832	37 17
175	Russell ....R.	700	554 21	260	.....	10 00
176	St. George	700	235 93	5,363	2,958	33 01
177	St. Helen's	480	85 33	2,197	1,562	35 64
178	Saltfleet	.....	135 46	2,159	1,694	54 17
179	Scarboro'	430	163 09	4,688	1,750	78 19

ASSOCIATION PUBLIC LIBRARIES—Concluded

Statistics, 1915

No.	Library	Population	Total Expenditure	Volumes in Library	Circulation	Legislative Grant paid in 1916
			$ c.			$ c.
180	Schreiber .....R.	1,100	422 61	1,303	1,818	33 36
181	Scotland .....R.	400	174 19	1,811	1,335	46 70
182	Shedden	350	119 12	2,048	2,182	32 00
183	Shetland	250	133 95	546	501	61 22
184	Singhampton	100	28 89	302	334	10 00
185	Smithville	600	209 97	716	3,762	15 00
186	Solina	380	54 03	305	781	19 63
187	Southampton	1,680	155 43	5,662	5,540	28 13
188	South Mountain	400	27 80	1,053	842	.....
189	South River	No Report				
190	Speedside	300	79 94	1,512	832	31 29
191	Springfield	481	63 35	1,603	1,222	13 63
192	Stevensville	350	433 46	513	987	57 35
193	Strathcona	550	93 50	1,545	479	10 00
194	Strathroy	No Report				
195	Sudbury .....R.	7,000	684 90	1,451	3,491	50 69
196	Sydenham .....R.	700	166 02	1,649	2,765	63 12
197	Tavistock .....R.	1,030	280 13	5,076	7,416	73 50
198	Teeswater .....R.	913	507 59	4,331	5,205	99 14
199	Thamesford	Reorganized 1916				
200	Thamesville .....R.	900	208 28	3,217	2,170	25 00
201	Thedford	600	120 44	3,060	4,805	49 38
202	Thornbury	755	55 40	1,373	805	10 00
203	Thorndale	460	215 45	340	2,818	71 68
204	Tilbury	1,726	232 51	.....	.....	61 54
205	Tiverton	350	75 60	992	1,340	14 80
206	Tottenham	600	84 85	2,513	1,633	13 91
207	Trout Creek	504	5 00	1,140	178	.....
208	Tweed	1,365	209 94	1,935	5,912	38 56
209	Underwood	.....	127 45	2,469	2,185	57 49
210	Unionville	500	98 05	1,534	1,339	42 37
211	Vankleek Hill	1,800	50 00	1,705	1,200	10 00
212	Victoria .....R.	280	96 92	3,486	1,351	43 58
213	Victoria Mines	450	104 65	1,208	1,827	44 94
214	Victoria Road	701	79 04	331	440	27 53
215	Walton	200	71 51	1,220	642	27 61
216	Wardsville .....R.	250	144 28	1,982	2,632	36 10
217	Warkworth .....R.	600	110 00	1,447	673	11 52
218	Waterdown .....R.	No Report				
219	Welland .....R.	7,242	473 13	5,024	8,475	95 26
220	Wellesley	800	46 81	2,584	2,958	10 00
221	Westford	160	63 68	2,201	98	.....
222	West Lorne	651	69 00	1,176	1,019	15 45
223	White Lake	180	15 02	811	796	5 00
224	Wiarton .....R.	2,050	364 00	3,181	5,071	69 86
225	Williamstown	400	74 00	2,314	839	30 68
226	Winchester .....R.	1,044	209 86	1,578	4,754	43 32
227	Woodville .....R.	400	150 70	2,584	984	55 97
228	Worthington	600	68 45	159	.....	.....
229	Zephyr	180	108 99	1,365	889	40 37
	Total	.....	32,790 17	427,113	510,287	7,944 08

Libraries with Reading rooms are marked "R."

Population given is that furnished by the libraries, except where error was discovered.

NOTES FROM PUBLIC LIBRARIES REGISTER

Libraries Removed from the Register

Eight libraries were removed from the register in 1915, but were counted in the summary of active libraries in the report from the Inspector's office as published last year. The names of these libraries follow: Belfountain, Bradford, Callander, Copper Cliff, Elk Lake, Newboro, Richmond and Thamesford.

Ten libraries closed in 1915 or 1914, and were removed from the official register of active libraries in 1916. They were as follows: Apple Hill, Carp, Dalhousie, Dundalk, Dunvegan, Mallorytown, Matilda, Rockwood, Sunderland, and Woodbridge.

A few libraries became inactive in 1915, but according to the Public Libraries Act they cannot be removed from the register until 1917.

Libraries Reorganized

Two Association Public Libraries: Lucan and Thamesford filed reorganization papers in 1916.

GRANTS TO HISTORICAL, LITERARY AND SCIENTIFIC INSTITUTIONS

The following Historical, Literary and Scientific Institutions, etc., duly reported according to the requirements of the Act, and received the undermentioned grants during the fiscal year ended October 31st, 1916.

Name of Institution	Grant Paid
	$ c.
Brant Historical Society	100 00
Elgin Historical and Scientific Association	100 00
Essex Historical Society	100 00
Huron Institute	100 00
Kent Historical Society	100 00
Kingston Historical Society	100 00
L'Alliance Française, Ottawa (including $100 arrears)	400 00
Lennox and Addington Historical Society	100 00
Lundy's Lane Historical Society	200 00
London and Middlesex Historical Society	100 00
Niagara Historical Society	200 00
Ontario Historical Society	800 00
Simcoe County Pioneer and Historical Society	100 00
Thunder Bay Historical Society, Fort William	100 00
Wentworth Historical Society	200 00
Women's Canadian Historical Society of Ottawa	200 00
Women's Canadian Historical Society of Toronto	100 00
Women's Wentworth Historical Society	300 00
Hamilton Scientific Association	400 00
Canadian Institute (including $750 arrears)	2,250 00
Club Litteraire Canadien Français, Ottawa	200 00
L'Institut Canadien Français d'Ottawa	200 00
Ottawa Field Naturalists' Club	200 00
Royal Astronomical Society, Toronto	600 00
Society of Chemical Industry	200 00
Ontario Library Association	400 00
Reading Camp Association	2,000 00
St. Patrick's Literary Association of Ottawa	200 00
Canadian Free Library for the Blind	500 00
Waterloo Historical Society	100 00
United Empire Loyalists	200 00
York Pioneers	200 00

W. O. Carson,
Inspector of Public Libraries.

APPENDIX G

STATISTICS OF PUBLIC, SEPARATE, CONTINUATION AND HIGH SCHOOLS

Summary

I. ELEMENTARY SCHOOLS

a. Public Schools

Number of Public Schools in 1915		6,063
Increase for the year	32	
Number of enrolled pupils of all ages in the Public Schools during the year (exclusive of Continuation, Kindergarten and Night School pupils)		437,593
Increase for the year	10,026	
Average daily attendance of pupils		291,127
Increase for the year	15,578	
Percentage of average attendance to total attendance		66.52
Increase for the year	2.08	
Number of persons employed as teachers (exclusive of Continuation, Kindergarten and Night School teachers) in the Public Schools: men, 1,584; women, 8,877; total		10,461
Increase for the year	259	
Number of teachers who attended Normal School		7,637
Increase for the year	607	
Number of teachers who attended Normal College or Faculty of Education		966
Increase for the year	163	
Number of teachers with a University degree		143
Increase for the year	35	
Average annual salary for male teachers		$902
Increase for the year	$27	
Average annual salary for female teachers		$613
Increase for the year	$9	
Average experience of male teachers		11.84 years
Average experience of female teachers		7.42 years
Amount expended for teachers' salaries		$7,110,164
Amount expended for Public School houses (sites and buildings)		$3,195,326
Amount expended for all other purposes		$2,778,139
Total amount expended on Public Schools		$13,083,629
Decrease for the year	$442,123	
Cost per pupil (enrolled attendance)		$29.89
Decrease for the year	$1.74	

b. Roman Catholic Separate Schools

Number of Roman Catholic Separate Schools in 1915..		537
Increase for the year.....	18	
Number of enrolled pupils of all ages.....		67,481
Increase for the year.....	1,210	
Average daily attendance of pupils		45,733
Increase for the year.....	1,945	
Percentage of average attendance to total attendance....		67.77
Increase for the year	1.70	
Number of teachers		1,389
Increase for the year	45	
Amount expended for teachers' salaries		$503,946
Amount expended for school houses (sites and buildings)		$366,625
Amount expended for all other purposes		$313,276
Total amount expended on R. C. Separate Schools		$1,183,847
Decrease for the year	$141,369	
Cost per pupil (enrolled attendance)		$17.54
Decrease for the year	$2.45	

c. Protestant Separate Schools

Number of Protestant Separate Schools (included with Public Schools, *a*) in 1915		5
Number of enrolled pupils		423
Decrease for the year	12	
Average daily attendance of pupils		290
Decrease for the year	6	

d. Kindergartens

Number of Kindergartens in 1915		228
Increase for the year	12	
* Number of pupils enrolled		18,730
Average daily attendance of pupils		10,628
Increase for the year	1,118	
Number of teachers engaged		396

e. Night Public Schools

Number of Night Schools in 1915-1916		30
Increase for the year	2	
Number of pupils enrolled		1,794
Decrease for the year	361	
Average daily attendance of pupils		675
Increase for the year	24	
Number of teachers engaged		63
Decrease for the year	4	

* See page 257.

II. SECONDARY SCHOOLS

a. High Schools and Collegiate Institutes

Number of High Schools (including 48 Collegiate Institutes) in 1915		160
Number of pupils enrolled in High Schools		38,426
Increase for the year	1,960	
Average daily attendance of pupils		24,825
Increase for the year	1,465	
*Number of teachers in High Schools		1,020
*Average annual salary, Principals		$1,813
Decrease for the year	$23	
*Average annual salary, Assistants		$1,359
Decrease for the year	$14	
*Average annual salary, all teachers		$1,430
Decrease for the year	$15	
*Highest salary paid		$3,500
Amount expended for teachers' salaries		$1,472,673
Amount expended for school houses (sites and buildings)		$448,989
Amount expended for all other purposes		$549,312
Total amount expended on High Schools		$2,470,974
Decrease for the year	$973,966	
Cost per pupil (enrolled attendance)		$64.30

b. Continuation Schools

Number of Continuation Schools, 1915		132
Increase for the year	1	
Number of pupils in attendance		6,800
Increase for the year	731	
Average daily attendance of pupils		4,274
Increase for the year	462	
*Number of teachers		238
Increase for the year	1	
*Average annual salary, Principals		$1,086
Decrease for the year	$13	
*Average annual salary, Assistants		$740
Decrease for the year	$5	
*Highest salary paid		$2,000
Amount expended on teachers' salaries		$219,660
Amount expended for school houses (sites and buildings)		$37,103
Amount expended for all other purposes		$54,031
Total amount expended on Continuation Schools		$310,794
Increase for the year	$16,669	
Cost per pupil (enrolled attendance)		$45.70
Decrease for the year	$2.76	

*These statistics are based on Returns to the Department, dated January, 1916.

c. Night High Schools

Number of Night Schools in 1915-1916		13
Number of pupils enrolled		2,354
Decrease for the year	20	
Average daily attendance of pupils		577
Decrease for the year	84	
Number of teachers engaged		90
Increase for the year	6	

III. GENERAL

Elementary and Secondary Schools

*Total population of the Province		2,625,800
Pupils enrolled in elementary and secondary schools, 1915		573,178
Increase for the year	6,722	
Average daily attendance		377,839
Increase for the year	20,508	
Percentage of total population enrolled		21
Total expenditure		$17,049,244
Average cost per head of total population in 1915		$6.45

Average cost per pupil (enrolled attendance) in all Schools

	1902	1907	1912	1914	1915
Sites and buildings	$0 97	$2 86	$5 90	$10 58	$7 06
Teachers' salaries	7 63	10 44	14 26	15 69	16 24
All other expenses	2 80	4 40	5 34	6 54	6 44
For all purposes	11 40	17 70	25 50	32 81	29 74

Average Cost per Pupil (average attendance) in all Schools

	1902	1907	1912	1914	1915
Sites and buildings	$1 70	$4 86	$9 63	$16 78	$10 71
Teachers' salaries	13 34	17 78	23 26	24 87	24 63
All other expenses	4 89	7 50	8 71	10 37	9 78
For all purposes	19 93	30 14	41 60	52 02	45 12

*Estimated

Comparative School Statistics, 1867-1915

I. PUBLIC AND SEPARATE SCHOOLS

These tables, 1, 2, 3, 4 and 5, for the purpose of comparison with previous years in which the Separate Schools were included with Public Schools, include Roman Catholic and Protestant Separate Schools. The tables A, B, C, D and E give the statistics of the Public Schools including Protestant Separate Schools; the statistics of the R. C. Separate Schools are given in Tables F and G; those of the Protestant Separate Schools appear in Table N; the Kindergartens in Table O; and the Night Schools in Table P.

1. School Population—Attendance

The school population of the Province (as ascertained by the assessors), and the school attendance, are given in the following table:

Year	School age	School population	Pupils enrolled under 5 years of age	Pupils enrolled 5 to 21	Pupils enrolled over 21	Total number of enrolled pupils	Boys	Girls	Average daily attendance	Percentage of average attendance to total number attending school
1867..	5—16	447,726	.....	*a*380,511	*b*21,132	401,643	213,019	188,624	163,974	40.82
1872..	5—16	495,756	.....	*a*433,664	*b*20,998	454,662	238,848	215,814	188,701	41.50
1877..	5—16	494,804	1,430	488,553	877	490,860	261,070	229,790	217,184	44.25
1882..	5—16	483,817	1,352	469,751	409	471,512	246,966	224,546	214,176	45.42
1887..	5—21	611,212	1,569	491,242	401	493,212	259,083	234,129	245,152	49.71
1892..	5—21	595,238	1,636	483,643	391	485,670	253,091	232,579	253,830	52.26
1897..	5—21	590,055	1,385	481,120	272	482,777	251,677	231,100	273,544	56.66
1902..	5—21	584,512	1,001	452,977	110	454,088	232,880	221,208	261,480	57.58
1907..	5—21	590,285	691	447,452	75	448,218	229,794	218,424	266,503	59.45
1912..	5—21	609,127	471	466,526	*c*25	*c*467,022	*c*239,187	*c*227,835	*c*291,210	62.35
1914..	5—21	636,616	456	493,329	*c*53	*c*493,838	*c*252,202	*c*241,636	*c*319,337	64.66
1915..	5—21	643,975	526	504,505	*c*43	*c*505,074	*c*258,000	*c*247,074	*c*336,860	66.69

a 5-16.
b Other ages than 5 to 16.
c Continuation School attendance excluded.
NOTE.—Kindergarten and Night School pupils are not included in above table.

The increase in the enrolled attendance for the year was 11,236, and in the percentage of average to total attendance, the gain was 2.03.

The following table compares the attendance and gives the percentages from rural and from urban municipalities for several years:

Year	Attendance in Rural Schools	Attendance in Urban Schools
1903	260,617 or 57.88% of total	189,661 or 42.12% of total
1907	242,247 or 54.05% of total	205,971 or 45.95% of total
1912	227,263 or 48.66% of total	239,759 or 51.33% of total
1914	228,225 or 46.21% of total	265,613 or 53.78% of total
1915	231,681 or 45.87% of total	273,393 or 54.13% of total

2. Classification of Pupils

Year	1st Reader, Part I, or Primer	1st Reader, Part II, or 1st Book	2nd Book	3rd Book	4th Book	5th Book, or beyond 4th Book	Drawing (Art)
1867	.....	* 79,365	98,184	83,211	68,896	71,987	5,450
1872	.....	*160,828	100,245	96,481	67,440	29,668	57,582
1877	.....	*153,630	108,678	135,824	72,871	19,857	153,036
1882	.....	*165,834	106,229	117,352	71,740	10,357	176,432
1887	115,657	76,704	100,533	108,096	81,984	10,238	375,097
1892	114,932	73,015	96,074	99,345	88,934	13,370	435,239
1897	110,567	70,808	91,330	99,682	89,314	21,076	448,444
1902	107,441	69,062	85,732	90,630	83,738	17,485	434,030
1907	112,552	60,194	84,622	89,371	85,752	15,727	394,736
1912	126,100	67,368	92,728	88,811	85,213	† 6,802	444,975
1914	131,306	72,650	100,798	96,330	85,867	† 6,887	473,524
1915	131,844	72,898	102,972	100,023	90,050	† 7,287	486,808

Year	Geography	Music	Physiology and Hygiene	English History	Canadian History	Composition	Grammar
1867	272,173	47,618	.....	‡61,787	.....	147,412	147,412
1872	327,139	110,083	.....	47,019	37,339	105,512	176,644
1877	375,951	168,942	.....	59,694	43,401	226,977	226,977
1882	280,517	158,694	33,926	‡150,989	.....	209,184	209,184
1887	316,791	203,567	71,525	94,830	114,141	270,856	270,856
1892	334,947	220,941	171,594	106,505	147,451	294,331	294,331
1897	342,189	233,915	215,343	114,396	169,627	316,787	316,787
1902	318,755	268,356	194,459	106,282	163,672	296,172	296,172
1907	336,073	274,493	249,524	139,212	195,266	357,969	222,745
1912	379,101	349,206	356,223	163,861	207,544	401,692	166,251
1914	414,373	388,282	393,929	182,388	227,581	437,436	151,519
1915	423,863	413,898	417,602	178,453	223,913	455,222	143,173

The following table classifies the pupils in the various readers, as to rural and urban schools:

	Year	First Reader Part I or Primer	First Reader Part II or First Book	Second Book	Third Book	Fourth Book	Fifth Book or beyond Fourth Book	Totals
Rural Schools	1904	60,784	36,941	47,930	50,297	47,289	9,892	253,133
Rural Schools	1907	60,470	31,538	46,219	48,247	46,815	8,958	242,247
Rural Schools	1912	62,712	30,293	43,775	42,450	44,049	†3,984	227,263
Rural Schools	1914	63,666	31,391	45,144	43,154	41,483	†3,387	228,225
Rural Schools	1915	63,697	32,103	45,816	44,058	42,599	†3,408	231,681
Urban Schools (cities, towns and incorporated villages)	1904	44,456	27,800	37,299	39,814	35,815	6,304	191,488
	1907	52,082	28,656	38,403	41,124	38,937	6,769	205,971
	1912	63,388	37,075	48,953	46,361	41,164	†2,818	239,759
	1914	67,640	41,259	55,654	53,176	44,384	†3,500	265,613
	1915	68,147	40,795	57,156	55,965	47,451	†3,879	273,393

* In 1st Reader. † Exclusive of Continuation School pupils. ‡ History.

3. Teachers' Certificates

Year	Number of teachers	Male	Female	1st Class	2nd Class	3rd Class	Other certificates, including old County Board, etc.	Number of teachers who attended Normal School	*Normal College or Faculty of Education
1867.....	4,890	2,849	2,041	1,899	2,454	386	151	666	.....
1872.....	5,476	2,626	2,850	1,337	1,477	2,084	578	828	.....
1877.....	6,468	3,020	3,448	250	1,304	3,926	988	1,084	.....
1882.....	6,857	3,062	3,795	246	2,169	3,471	971	1,873	.....
1887.....	7,594	2,718	4,876	252	2,553	3,865	924	2,434	.....
1892.....	8,480	2,770	5,710	261	3,047	4,299	873	3,038	.....
1897.....	9,128	2,784	6,344	343	3,386	4,465	934	3,643	.....
1902.....	9,367	2,294	7,073	608	4,296	3,432	1,031	4,774	.....
1907.....	9,893	1,783	8,110	715	3,887	3,452	1,839	4,587	.....
†1912.....	10,757	1,511	9,246	674	6,419	1,804	1,860	6,705	614
†1914.....	11,546	1,628	9,918	878	7,387	1,771	1,510	7,565	833
†1915.....	11,850	1,685	10,165	1,051	8,025	1,520	1,254	8,196	1,010

NOTE.—Kindergarten and Night School teachers are not included in above table.

The number of men engaged in teaching in these schools in 1915 was 14.22 per cent. of the whole; in 1914 the number was 14.10 per cent.

The number of teachers and the class of certificates, in the Public Schools alone, in each County and District of the Province, will be found in Table C of this Appendix, pages 158 to 161.

The following table classifies the teachers and certificates as to rural and urban schools:

—	Teachers			Certificates			
	Total	Male	Female	1st Class	2nd Class	3rd Class	Other Class
Rural Schools, 1904.....	5,974	1,469	4,505	152	1,944	3,107	771
Rural Schools, 1907.....	6,038	1,201	4,837	180	1,542	3,079	1,237
†Rural Schools, 1912.....	6,145	894	5,249	165	3,002	1,463	1,513
†Rural Schools, 1914.....	6,276	948	5,328	230	3,409	1,470	1,167
†Rural Schools, 1915.....	6,351	963	5,388	308	3,839	1,283	921
Urban (cities, towns and incorporated villages), 1904	3,580	606	2,974	483	2,248	289	560
Urban, 1907	3,855	582	3,273	535	2,345	373	602
†Urban, 1912	4,614	617	3,997	509	3,417	341	347
†Urban, 1914	5,270	680	4,590	648	3,978	301	343
†Urban, 1915	5,499	722	4,777	743	4,186	237	333

* For the years previous to 1912 the numbers who attended Normal College or the Faculty of Education are included in the preceding column.

†Exclusive of Continuation School teachers.

4. Teachers' Salaries and Experience

Teachers' Salaries

Year	Highest salary paid	Average salary, male teacher, province	Average salary, female teacher, province	Average salary, male teacher, cities	Average salary, female teacher, cities	Average salary, male teacher, towns	Average salary, female teacher, towns	Average salary, male teacher, incorporated villages	Average salary, female teacher, incorporated villages	*Average salary, male teacher, rural schools	*Average salary, female teacher, rural schools	Average salary, male teacher, all urban schools	Average salary, female teacher, all urban schools
	$	$	$	$	$	$	$	$	$	$	$	$	$
1867.	1,350	346	226	532	243	464	240	.....	.....	261	189	....	.....
1872.	1,000	360	228	628	245	507	216	.....	.....	305	213	.....	.....
1877.	1,100	398	264	735	307	583	269	.....	.....	379	251	.....	.....
1882.	1,100	415	269	742	331	576	273	.....	.....	385	248	.....	.....
1887.	1,450	425	292	832	382	619	289	.....	.....	398	271	.....	.....
1892.	1,500	421	297	894	402	648	298	.....	.....	383	269	.....	.....
1897.	1,500	391	294	892	425	621	306	.....	.....	347	254	.....	.....
1902.	1,600	436	313	935	479	667	317	.....	.....	372	271	.....	.....
1907.	1,900	596	420	1,157	592	800	406	659	372	458	379	907	453
1912.	2,200	788	543	1,320	703	977	519	779	492	566	493	1,141	618
1914.	2,400	875	604	1,484	772	1,033	577	840	537	614	543	1,276	686
1915.	2,400	902	613	1,502	779	1,067	586	840	540	621	549	1,310	696

*Incorporated villages included from 1867 to 1902 inclusive.

Increases in salaries in the cities, towns, villages and rural schools are shown in the above table. In Table C, pages 158 to 160, the average salaries for 1915 of the Public School teachers of the various Counties and Districts are given separately, and summarized for the cities, towns and villages. This table also states the salaries paid to teachers according to the grade of certificate held, and illustrates to what extent the teacher with the higher certificate commands the higher salary. The average salaries for the Province are as follows:

	Male	Female
First Class certificates	$1,433	$668
Second Class certificates	830	647
Third Class and District certificates	526	479
Temporary certificates	454	408

Teachers' Experience

The length of service or experience of the teachers engaged in the Public Schools is also shown in Table C, where the numbers who have taught from less than one year up to forty years and over are given for each year, and where the experience of the teachers, according to the grade of certificate held, is given.

The average experience in the Public Schools at the end of 1915 was as follows:

Male teachers, 11.84 years.
Female teachers, 7.42 years.
All teachers, 8.09 years.

5. Receipts and Expenditures

Year	Receipts				Expenditures					
	Legislative grants	Municipal school grants and assessments	Clergy reserve funds, balances and other sources	Total receipts	Teachers' salaries	Sites and building school houses	Libraries, maps, apparatus, prizes, etc.	Rent, repairs, fuel and other expenses	Total expenditure	Cost per pupil
	$	$	$	$	$	$	$	$	$	$ c
1867.	187,153	1,151,583	331,599	1,670,335	1,093,517	149,195	31,354	199,123	1,473,189	3 67
1872.	225,318	1,763,492	541,460	2,530,270	1,371,594	456,043	47,799	331,928	2,207,364	4 85
1877.	251,962	2,422,432	730,687	3,405,081	2,038,099	477,393	47,539	510,458	3,073,489	6 26
1882.	265,738	2,447,214	757,038	3,469,990	2,144,449	341,918	15,583	525,025	3,026,975	6 42
1887.	268,722	3,084,352	978,283	4,331,357	2,458,540	544,520	27,509	711,535	3,742,104	7 59
1892.	283,791	3,300,512	1,227,596	4,811,899	2,752,629	427,321	40,003	833,965	4,053,918	8 40
1897.	366,538	3,361,562	1,260,055	4,988,155	2,886,061	391,689	60,585	877,335	4,215,670	8 73
1902.	383,666	3,959,912	1,422,924	5,766,502	3,198,132	432,753	86,723	1,107,552	4,825,160	10 62
1907.	655,239	6,146,825	2,455,864	9,257,928	4,389,524	1,220,820	213,096	1,732,739	7,556,179	16 85
1912.	842,278	9,478,887	3,936,887	14,258,052	6,109,547	2,777,960	167,755	2,218,698	11,273,960	24 14
1914.	760,845	12,608,865	4,069,565	17,439,275	7,203,034	4,626,030	167,283	2,854,621	14,850,968	30 07
1915.	849,872	11,810,023	4,089,210	16,749,105	7,614,110	3,561,951	177,038	2,914,377	14,267,476	28 24

The increase for the year in the amount paid as teachers' salaries was $411,076. The total expenditure decreased by $583,492.

The expenditure per pupil of enrolled attendance decreased from $30.07 to $28.24, and from $46.50 to $42.35 per pupil of average attendance.

These tables show the expenditure per pupil for the years as given below:

Average cost per pupil (enrolled attendance)

	1902	1907	1912	1914	1915
Teachers' salaries	$7.04	$9.79	$13.08	$14.58	$15.07
Sites and buildings	0.95	2.72	5.95	9.37	7.05
All other expenses	2.63	4.34	5.11	6.12	6.12
For all purposes	$10.62	$16.85	$24.14	$30.07	$28.24

Average cost per pupil (average attendance)

	1902	1907	1912	1914	1915
Teachers' salaries	$12.23	$16.47	$20.98	$22.55	$22.60
Sites and buildings	1.65	4.58	9.54	14.49	10.57
All other expenses	4.57	7.30	8.19	9.46	9.18
For all purposes	$18.45	$28.35	$38.71	$46.50	$42.35

The expenditure per pupil (enrolled attendance) for 1915 in the Public Schools alone will be found in Table E, pages 174 and 175, and for the R. C. Separate Schools in Table F, pages 180 and 181. The expenditure will there be shown as to rural schools, cities, towns, and villages separately.

II. ROMAN CATHOLIC SEPARATE SCHOOLS

Year	Schools—Teachers—Pupils			Number of Pupils in the various Branches of Instruction						
	Schools open	Teachers	Pupils	Geography	Composition	Grammar	Drawing (Art)	Physiology and Hygiene	English History	Canadian History
1867	161	210	18,924	8,666	.....	5,688	.....	.....	*2,571	.....
1872	171	254	21,406	8,011	7,908	7,908	.....	.....	*3,548	.....
1877	185	334	24,952	13,154	11,174	11,174	.....	.....	*9,812	.....
1882	190	390	26,148	13,900	11,695	11,695	7,548	2,033	*10,124	.....
1887	229	491	30,373	19,608	18,678	18,678	21,818	8,578	5,076	7,931
1892	312	662	37,466	26,299	22,755	22,755	32,682	11,056	6,713	11,483
1897	340	752	41,620	27,471	26,071	26,071	36,462	18,127	6,828	13,134
1902	391	870	45,964	29,788	27,409	27,409	41,952	14,687	7,544	15,035
1907	449	1,034	51,502	34,874	35,550	23,185	36,844	23,552	11,328	19,971
1912	513	1,237	61,297	50,449	53,717	18,837	56,572	47,939	17,429	28,138
1914	519	1,344	66,271	59,544	61,054	19,807	62,641	48,831	21,988	33,526
1915	537	1,389	67,481	61,227	63,255	21,310	63,645	59,361	21,844	31,516

*History.

Receipts and Expenditures

Year	Receipts				Expenditures					
	Legislative grants	Municipal school grants and assessments	Balances, subscribed and other sources	Total receipts	Teachers' salaries	Sites and building school houses	Libraries, maps, apparatus, prizes, etc.	All other purposes	Total expenditure	Cost per pupil
	$	$	$	$	$	$	$	$	$	$ c.
1867..	9,993	26,781	11,854	48,628	34,830	.....	.....	†7,889	42,719	2 26
1872..	12,327	41,134	15,349	68,810	45,824	.....	.....	†15,993	61,817	2 88
1877..	13,607	72,177	34,482	120,266	70,201	24,510	2,811	17,284	114,806	4 60
1882..	14,382	97,252	55,105	166,739	84,095	36,860	1,303	32,082	154,340	5 13
1887..	16,808	147,639	65,401	229,848	112,293	48,937	3,624	46,369	211,223	6 95
1892..	21,043	206,698	98,293	326,034	149,707	65,874	2,922	71,335	289,838	7 74
1897..	26,675	224,617	84,032	335,324	168,800	41,233	5,786	86,350	302,169	7 26
1902..	30,472	293,348	161,683	485,503	210,199	100,911	6,158	118,173	435,441	9 47
1907..	40,524	442,316	308,540	791,380	281,484	186,908	15,991	229,793	714,176	13 86
1912..	51,846	757,255	377,713	1,186,814	456,800	308,193	15,207	263,024	1,043,224	17 01
1914..	44,468	903,988	518,817	1,467,273	509,757	445,696	22,398	347,365	1,325,216	19 99
1915..	42,131	879,903	425,468	1,347,502	503,946	366,625	14,421	298,855	1,183,847	17 54

†Including all expenditure except for Teachers' salaries.

An increase of 1,210 in the enrolment and a decrease of $141,369 in the expenditure in 1915 are noticed in the above tables. The expenditure per pupil of enrolled attendance decreased from $19.99 to $17.54. Detailed statistics in reference to these schools will be found in Table F and G, pages 176 to 193.

III. PROTESTANT SEPARATE SCHOOLS

The following is a complete list of the Protestant Separate Schools of the Province:—No. 4 Grattan, No. 2 Hagarty, No. 1 Tilbury North, L'Orignal, and Penetanguishene.

They were attended by 423 pupils in 1915. The whole amount expended for their maintenance and permanent improvements was $9,536.58. One teacher held a First Class certificate, seven teachers held Second Class, and three held Third Class certificates.

Complete statistics for these schools will be found in Table N, page 256.

IV. CONTINUATION SCHOOLS

The following table gives statistics of the "Continuation Classes, Grade A," up to and including 1907. Thereafter they are known as "Continuation Schools." Formerly the statistics of these schools were included with the statistics of the Public and Separate Schools, consequently certain items for the years 1897-1907 cannot be given.

Year	Schools	One-teacher schools	Two-teacher schools	Three-teacher schools	Number of teachers	Receipts		Expenditure		Total value of Equipment	No. of Pupils	Percentage of average attendance to total attendance	Cost per pupil
						Legislative grant	Total Receipts	Paid for Teachers' Salaries	Total Expenditure				
						$	$	$	$	$			
1897...	27	20	7	....	34	2,700	.....	.....	.....	.....	1,275	.....	.....
1902...	59	46	12	1	73	8,350	.....	.....	.....	.....	1,856	.....	.....
1907...	91	65	24	2	119	25,610	.....	73,325	.....	26,345	3,993	.....	.....
1912...	138	54	73	11	226	64,081	295,261	202,875	265,087	75,556	6,094	61.97	$43.49
1914...	131	32	91	8	237	69,811	325,903	208,386	294,125	75,457	6,069	62.81	48.46
1915...	132	29	98	5	238	63,529	344,898	219,660	310,794	80,961	6,800	62.85	45.70

Statistics in detail for 1915 in reference to the Continuation Schools will be found in Tables H, I, and J, pages 194 to 217.

Average Cost per pupil (enrolled attendance)

	1913	1914	1915
Teachers' salaries	$33.29	$34.34	$32.30
Sites and buildings	2.58	5.44	5.46
All other expenses	7.62	8.68	7.94
For all purposes	$43.49	$48.46	$45.70

Average Cost per pupil (average attendance)

	1913	1914	1915
Teachers' salaries	$53.71	$54.66	$51.39
Sites and buildings	4.17	8.67	8.68
All other purposes	12.30	13.82	12.64
For all purposes	$70.18	$77.15	$72.71

V. COLLEGIATE INSTITUTES AND HIGH SCHOOLS

The following tables give comparative statistics respecting Collegiate Institutes and High Schools from 1867 to 1915 inclusive:—

1. Receipts, Expenditure, Attendance, etc.

Year	Schools	Teachers	Receipts			Expenditure			Pupils	Percentage of average attendance to total attendance	Cost per pupil
			Legislative grant	Amount of fees	Total receipts	Paid for teachers' salaries	Paid for sites and buildings	Total expenditure			
			$	$	$	$	$	$			$ c.
1867....	102	159	54,562	15,605	139,579	94,820	*19,190	124,181	5,696	55	21 86
1872....	104	239	79,543	20,270	223,269	141,812	*31,360	210,005	7,968	56	26 34
1877....	104	280	78,762	20,753	357,521	211,607	*51,417	343,710	9,229	56	37 26
1882....	104	332	84,304	29,270	373,150	253,864	*19,361	343,720	12,348	53	27 50
1887 ...	112	398	91,977	56,198	529,323	327,452	*73,061	495,612	17,459	59	28 38
1892 ..	128	522	100,000	97,273	793,812	472,029	*91,108	696,114	22,837	60	30 48
1897....	130	579	101,250	110,859	767,487	532,837	*46,627	715,976	24,390	61	29 35
1902....	134	593	112,650	105,801	832,853	547,402	44,246	769,680	24,472	58.97	31 45
1907....	143	750	158,549	138,396	1,611,553	783,782	193,975	1,213,697	30,331	60.94	40 01
1912....	148	917	209,956	145,685	2,414,128	1,232,537	327,982	1,953,061	32,273	62.80	60 51
1914....	161	1023	260,955	163,280	4,531,534	1,476,756	1,335,308	3,444,940	36,466	64.06	94 46
1915....	160	1020	191,374	170,044	3,007,835	1,472,673	448,989	2,470,974	38,426	64.60	64 30

*Expenses for repairs, etc., included.

There was an increase for the year of 1,960 in the enrolment of these schools. The expenditure per pupil of enrolled attendance decreased from $94.46 in 1914 to $64.30 in 1915, and the total expenditure decreased by $973,966. This decrease in expenditure is chiefly under the heading, "Sites and Buildings."

Average cost per pupil (enrolled attendance)

	1902	1907	1912	1914	1915
	$ c.	$ c.	$ c.	$ c.	$ c.
Teachers' salaries	22 37	25 34	38 19	40 49	38 32
Sites and buildings	1 81	6 39	10 16	36 62	11 68
All other expenses	7 27	7 78	12 16	17 35	14 30
For all purposes	31 45	40 01	60 51	94 46	64 30

Average cost per pupil (average attendance)

	1902	1907	1912	1914	1915
	$ c.	$ c.	$ c.	$ c.	$ c.
Teachers' salaries.....	37 93	42 40	60 81	63 22	59 32
Sites and buildings	3 07	10 49	16 18	57 16	18 08
All other purposes	12 34	12 76	19 37	27 09	22 13
For all purposes	53 34	65 65	96 36	147 47	99 53

2. Classification of Pupils, etc.

Year	English						Mathematics			
	English Grammar	English Composition	Poetical Literature	Geography	Canadian History	British History	Arithmetic and Mensuration	Algebra	Geometry	Trigonometry
1867	5,467	4,091	.....	5,264	.....	†4,634	5,526	2,841	1,847	141
1872	7,884	7,278	.....	7,715	.....	†7,513	7,834	6,033	2,592	174
1877	8,819	8,772	.....	9,158	.....	†9,106	9,227	8,678	8,113	359
1882	12,275	12,189	.....	12,106	.....	†12,220	12,261	11,742	11,148	397
1887	17,086	17,171	16,649	16,962	.....	†17,010	16,939	16,904	14,839	1,017
1892	22,530	22,535	22,468	22,118	.....	†22,328	21,869	22,229	17,791	1,154
1897	19,591	24,195	24,176	13,747	18,318	20,304	19,798	24,105	16,788	1,652
1902	21,576	24,241	23,768	14,500	14,768	16,817	21,594	22,953	16,881	1,662
1907	26,415	29,383	*29,377	22,820	23,457	23,570	26,813	26,937	23,054	2,000
1912	22,943	31,047	*31,179	21,733	24,463	23,673	23,858	28,947	25,252	1,954
1914	24,252	34,759	*34,784	24,377	29,461	26,031	25,344	32,687	23,203	2,285
1915	26,117	37,314	*37,443	26,604	31,588	28,196	26,689	35,459	24,149	2,062

* English Literature. † History.

2. Classification of Pupils, etc.—Continued

Year	Languages				Science		
	Latin	Greek	French	German	Physics	Chemistry	Botany
1867	5,171	802	2,164	.....	1,876	840	.....
1872	3,860	900	2,828	341	1,921	1,151	.....
1877	4,955	871	3,091	442	2,168	2,547	.....
1882	4,591	815	5,363	962	2,880	2,522	.....
1887	5,409	997	6,180	1,350	5,265	3,411	4,640
1892	9,006	1,070	10,398	2,796	6,601	3,710	6,189
1897	16,873	1,421	13,761	5,169	11,002	5,489	12,892
1902	18,884	631	13,595	3,280	12,758	5,860	9,051
1907	20,511	677	17,310	3,835	23,421	15,064	15,572
1912	23,508	611	21,009	4,911	24,984	16,418	17,070
1914	25,989	553	23,797	5,396	28,524	17,726	19,008
1915	28,597	691	26,462	4,606	29,208	18,876	20,927

2. Classification of Pupils, etc.—Concluded

Year	Drawing (Art)	Bookkeeping	Destination of Pupils			Number of schools charging fees	Number of free schools
			Mercantile life	Agriculture	Teaching		
1867	676	1,283	.....	.....	.....	67	36
1872	2,176	3,127	486	300	.....	28	76
1877	2,755	3,621	555	328	.....	35	69
1882	3,441	5,642	881	646	.....	37	67
1887	14,295	14,064	1,141	882	.....	58	54
1892	16,980	16,700	1,111	1,006	1,527	77	51
1897	12,252	11,647	1,368	1,153	2,056	87	43
1902	10,721	11,334	1,573	743	1,238	82	52
1907	15,365	13,468	1,982	803	1,436	81	62
1912	17,387	16,533	2,178	855	1,490	82	66
1914	19,000	8,851	1,766	819	1,318	88	73
1915	21,101	10,391	1,879	981	1,449	85	75

The statistics in detail of the various Collegiate Institutes and High Schools of the Province for 1915, will be found in Tables K, L, and M, pages 218 to 255.

VI. TEACHERS' INSTITUTES

This table presents the work of the Teachers' Institutes for thirty-nine years:

Year	No. of Teachers' Institutes	No. of Members	No. of Teachers in the Province. (High School teachers not included)	Receipts				Expenditure	
				Amount received from government grants	Amount received from municipal grants	Amount received from members' fees	Total amount received	Amount paid for Libraries	Total amount expended
				$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1877	42	1,181	6,468	1,412 50	100 00	299 75	2,769 44	.....	1,127 63
1882	62	4,395	6,857	2,900 00	300 00	1,088 84	9,394 28	453 02	5,355 33
1887	66	6,781	7,594	1,800 00	1,879 45	730 66	10,405 95	1,234 08	4,975 50
1892	69	8,142	8,480	1,950 00	2,105 00	875 76	12,043 54	1,472 41	6,127 46
1897	73	7,627	9,128	2,425 00	2,017 45	901 15	12,446 20	1,479 88	6,598 84
1902	77	8,515	9,367	2,515 00	1,877 50	1,171 80	13,171 26	1,437 18	7,188 45
1907	81	9,319	9,893	2,850 00	1,920 00	1,671 32	14,824 09	654 16	7,487 41
1912	83	*9,913	10,757	3,800 00	2,100 78	1,961 10	22,120 70	1,359 24	10,120 89
1914	87	*11,684	11,546	5,650 00	3,645 27	3,044 40	34,648 09	2,358 06	17,651 75
1915	87	*12,152	11,850	4,300 00	3,288 57	3,086 33	34,567 39	2,264 11	20,241 29

See Appendix II for details for 1915.

*Registered attendance of members.

VII. DEPARTMENTAL EXAMINATIONS, Etc.

1. Table showing the Number of Teachers in Training at Provincial Normal Schools, and the Pupils at the Normal Model Schools in connection therewith, etc., 1877-1916

Year	No. of Normal School teachers	No. of Normal School students	No. of Normal Model School and Kindergarten teachers	No. of Normal Model School and Kindergarten pupils
1877.....	13	257	8	643
1882.....	16	260	15	799
1887.....	13	441	18	763
1892.....	12	428	22	842
1897.....	13	407	23	832
1902.....	16	619	31	958
1907-08...	*35	428	*38	979 (1907)
1912-13...	*69	986	*38	914 (1912)
1915-16...	*77	1,609	*40	962 (1915)
1916-17...	*78	1,293	*43	971 (1916)

*Including those engaged in both a Normal and a Normal Model School.

2. High School Entrance Examinations, 1877-1916

Year	No. of Candidates examined	No. of Candidates who passed
1877.....	7,383	3,836
1882.....	9,607	4,371
1887.....	16,248	9,364
1892.....	16,409	8,427
1897.....	16,384	10,502
1902.....	18,087	13,300
1907.....	22,144	15,430
1912.....	22,679	13,977
1915.....	24,353	17,325
1916.....	23,135	15,357

3. Departmental Academic Examinations, 1916

Examinations	Total number of Candidates	Number passed	Number of Appeals	Number passed on appeal	Total number passed	Percentage
Senior Public School Graduation	68	16	1	0	16	23.52
Senior High School Entrance..	75	29	1	0	29	38.66
Model Entrance (June).....	157	52	1	0	52	33.12
English-French Model Entrance (June)	84	60	0	0	60	71.42
Model Entrance (August).....	95	62	0	0	62	65.26
English-French Model Entrance (August)	10	9	0	0	9	90.00
Lower School N.E. & F.E....	5,633	2,710	87	10	2,720	48.28
Middle School N. E. (June)....	2,990	1,678	69	7	1,685	56.35
Middle School N. E. (August)..	53	22	0	0	22	41.50
Upper School, Part I.....	538	330	22	1	331	61.52
Upper School, Part II.....	360	242	8	1	243	67.50
Junior Matriculation.....	3,385	*1,952	46	6	1,958	57.84
Supplemental Matriculation...	303	65	8	2	67	22.11
Totals.....	13,751	7,227	243	27	7,254	52.75

Number of Honour Matriculation Candidates.....	443
Number of Scholarship Matriculation Candidates.....	82

For the number of candidates granted standing under Regulations re Enlistment for Overseas Service and for Farm Employment, see page 6.

*Obtained either complete or partial Junior Matriculation.

THE PUBLIC SCHOOLS

I. TABLE A—SCHOOL POPULATION, ATTENDANCE, ETC.

	Rural Schools	School population between 5 and 21 years of age	Pupils under 5 years of age	Pupils between 5 and 21 years of age	Pupils over 21 years of age	Total number of pupils attending school	Boys	Girls	Average daily attendance of pupils	Percentage of average to total attendance
1	Brant	4,115	3	3,481	....	3,484	1,795	1,689	2,274	65
2	Bruce	8,045	....	5,792	....	5,792	3,029	2,763	3,844	66
3	Carleton	7,269	16	5,686	....	5,702	2,894	2,808	3,500	61
4	Dufferin	3,368	....	2,690	....	2,690	1,465	1,225	1,595	59
5	Dundas	3,314	10	2,801	1	2,812	1,493	1,319	1,932	69
6	Elgin	6,169	....	4,274	....	4,274	2,223	2,051	2,815	66
7	Essex	12,634	3	5,634	1	5,638	2,991	2,647	3,471	62
8	Frontenac	5,562	13	4,446	....	4,459	2,312	2,147	2,343	53
9	Glengarry	3,936	5	3,215	....	3,220	1,731	1,489	1,833	57
10	Grey	10,961	9	7,813	4	7,826	4,160	3,666	4,915	63
11	Haldimand	3,655	2	2,746	....	2,748	1,479	1,269	1,787	65
12	Haliburton	2,770	13	1,617	....	1,630	800	830	825	51
13	Halton	3,188	5	2,336	....	2,341	1,262	1,079	1,393	59
14	Hastings	8,324	7	6,789	2	6,798	3,480	3,318	4,052	60
15	Huron	9,380	4	6,293	1	6,298	3,322	2,976	4,282	68
16	Kent	9,311	32	6,561	....	6,593	3,432	3,161	3,714	56
17	Lambton	8,216	4	5,704	....	5,708	3,037	2,671	3,747	66
18	Lanark	4,189	4	3,113	....	3,117	1,581	1,536	2,053	66
19	Leeds and Grenville	7,552	19	6,171	....	6,190	3,166	3,024	3,700	60
20	Lennox and Addington	4,248	17	3,296	1	3,314	1,693	1,621	1,917	58
21	Lincoln	4,073	3	3,371	....	3,374	1,733	1,641	1,856	55
22	Middlesex	9,356	4	6,707	....	6,711	3,473	3,238	4,507	67
23	Norfolk	4,902	15	3,939	1	3,955	2,068	1,887	2,489	63
24	Northumberland & Durham	8,789	12	6,882	....	6,894	3,638	3,256	4,200	61
25	Ontario	7,015	3	5,230	1	5,234	2,723	2,511	3,258	62
26	Oxford	7,053	5	5,250	....	5,255	2,768	2,487	3,451	66
27	Peel	3,804	....	2,646	....	2,646	1,397	1,249	1,656	62
28	Perth	6,863	....	4,514	....	4,514	2,427	2,087	3,101	69
29	Peterborough	4,610	3	3,505	....	3,508	1,772	1,736	2,060	59
30	Prescott and Russell	12,070	12	3,384	1	3,397	1,774	1,623	2,040	60
31	Prince Edward	2,716	....	2,239	1	2,240	1,141	1,099	1,374	61
32	Renfrew	9,939	17	6,139	5	6,161	3,089	3,072	3,508	57
33	Simcoe	12,139	12	9,196	1	9,209	4,646	4,563	5,333	58
34	Stormont	4,687	13	2,859	....	2,852	1,474	1,378	1,701	60
35	Victoria	4,951	2	3,716	1	3,719	1,918	1,801	2,401	65
36	Waterloo	5,734	6	3,965	....	3,971	2,109	1,862	2,768	70
37	Welland	5,980	11	4,363	....	4,374	2,343	2,031	2,660	61
38	Wellington	7,116	7	4,693	....	4,700	2,512	2,188	3,094	66
39	Wentworth	6,531	6	5,278	....	5,284	2,619	2,665	2,965	56
40	York	15,922	3	13,117	....	13,120	6,777	6,343	7,921	60
41	Algoma	3,859	11	3,080	1	3,092	1,570	1,522	1,812	59
42	Kenora	531	....	443	....	443	227	216	221	50
43	Manitoulin	2,060	1	1,705	....	1,706	878	828	963	56
44	Muskoka	4,075	14	3,136	1	3,151	1,658	1,493	1,699	54
45	Nipissing	2,957	10	1,846	....	1,856	931	925	1,029	55
46	Parry Sound	4,933	11	3,844	2	3,857	2,004	1,853	2,090	54
47	Rainy River	1,375	2	1,188	....	1,190	607	583	623	52
48	Sudbury	3,724	21	2,438	....	2,459	1,234	1,225	1,204	49
49	Timiskaming	3,077	19	2,731	....	2,750	1,402	1,348	1,314	48
50	Thunder Bay, etc	2,393	1	1,989	2	1,992	1,012	980	1,116	56
	Totals	299,440	390	213,831	27	214,248	111,269	102,979	130,406	60.86

THE PUBLIC SCHOOLS—Continued

I. TABLE A—SCHOOL POPULATION, ATTENDANCE, ETC.—Continued

Cities	School population between 5 and 21 years of age	Pupils under 5 years of age	Pupils between 5 and 21 years of age	Pupils over 21 years of age	Total number of pupils attending school	Boys	Girls	Average daily attendance of pupils	Percentage of average to total attendance
1 Belleville	3,004	....	1,846	....	1,846	957	889	1,239	67
2 Kitchener (Berlin)	4,964	....	2,356	....	2,356	1,206	1,150	1,826	77
3 Brantford	6,611	....	3,819	....	3,819	1,956	1,863	2,808	74
4 Chatham	2,163	....	1,787	....	1,787	887	900	1,272	71
5 Fort William	4,417	....	2,529	....	2,529	1,263	1,266	1,896	75
6 Galt	2,939	....	1,773	....	1,773	907	866	1,350	76
7 Guelph	4,277	....	2,072	5	2,077	1,038	1,039	1,602	77
8 Hamilton	22,609	....	13,803	1	13,804	7,018	6,786	10,133	73
9 Kingston	6,005	....	2,820	....	2,820	1,382	1,438	1,975	70
10 London	9,998	....	8,363	....	8,363	4,204	4,159	5,843	70
11 Niagara Falls	2,057	....	1,683	....	1,683	829	854	1,141	68
12 Ottawa	23,703	....	8,987	....	8,987	4,410	4,577	6,442	72
13 Peterborough	5,047	....	2,629	....	2,629	1,342	1,287	2,040	78
14 Port Arthur	3,518	....	2,166	....	2,166	1,072	1,094	1,594	74
15 St. Catharines	3,722	....	2,324	....	2,324	1,158	1,166	1,615	69
16 St. Thomas	3,863	....	2,457	1	2,458	1,295	1,163	1,830	74
17 Sarnia	2,174	....	1,801	....	1,801	886	915	1,323	73
18 Sault Ste. Marie	2,763	41	1,790	....	1,831	935	896	1,379	75
19 Stratford	3,990	....	2,113	....	2,113	1,100	1,013	1,708	81
20 Toronto	82,193	80	60,670	5	60,755	30,693	30,062	44,546	73
21 Windsor	5,994	....	2,934	....	2,934	1,453	1,481	2,094	71
22 Woodstock	1,759	....	1,413	....	1,413	701	712	1,039	73
Totals	207,770	121	132,135	12	132,268	66,692	65,576	96,695	73.10
Towns									
1 Alexandria	853	....	64	....	64	30	34	42	66
2 Alliston	306	....	273	....	273	121	152	196	72
3 Almonte	691	....	340	....	340	172	168	254	75
4 Amherstburg	570	....	220	....	220	120	100	124	56
5 Arnprior	1,283	....	587	....	587	305	282	419	71
6 Aurora	490	....	446	....	446	215	231	299	67
7 Aylmer	470	....	402	....	402	216	186	280	70
8 Bala	65	....	69	....	69	30	39	47	68
9 Barrie	1,437	....	1,127	....	1,127	561	566	801	71
10 Blenheim	371	....	336	....	336	166	170	215	64
11 Blind River	552	....	180	....	180	82	98	137	76
12 Bothwell	155	....	126	....	126	73	53	84	67
13 Bowmanville	677	....	603	....	603	298	305	410	68
14 Bracebridge	876	....	624	....	624	285	339	451	72
15 Brampton	781	....	691	....	691	350	341	491	71
16 Brockville	2,315	....	1,428	....	1,428	739	689	1,064	74
17 Bruce Mines	155	....	187	....	187	98	89	119	64
18 Burlington	408	1	431	....	432	223	209	307	71
19 Cache Bay	178	....	138	....	138	60	78	93	67
20 Campbellford	739	....	577	....	577	284	293	426	74
21 Carleton Place	1,009	....	744	....	744	397	347	520	70
22 Charlton	94	....	104	....	104	70	34	57	55
23 Chesley	702	....	406	....	406	200	206	280	69
24 Clinton	585	....	405	....	405	208	197	312	77
25 Cobalt	1,223	....	976	....	976	490	486	561	57
26 Cobourg	1,033	....	548	....	548	255	293	417	76
27 Cochrane	550	3	316	1	320	159	161	183	57
28 Collingwood	1,504	....	1,163	....	1,163	562	601	848	73
29 Copper Cliff	743	....	570	....	570	284	286	437	77
30 Cornwall	1,956	....	605	....	605	285	320	458	76
31 Deseronto	625	....	466	....	466	255	211	329	71
32 Dresden	376	....	308	....	308	153	155	201	65
33 Dryden	260	....	246	....	246	130	116	163	66
34 Dundas	1,103	....	774	....	774	392	382	536	69

THE PUBLIC SCHOOLS—Continued

I. TABLE A—SCHOOL POPULATION, ATTENDANCE, ETC.—Continued

Towns—Continued	School population between 5 and 21 years of age	Pupils under 5 years of age	Pupils between 5 and 21 years of age	Pupils over 21 years of age	Total number of pupils attending school	Boys	Girls	Average daily attendance of pupils	Percentage of average to total attendance
35 Dunnville	605	....	512	....	512	264	248	350	68
36 Durham	463	....	316	....	316	138	178	233	74
37 Eastview	1,372	....	346	....	346	170	176	197	57
38 Englehart	221	....	225	....	225	123	102	132	59
39 Essex	411	....	310	....	310	154	156	230	74
40 Ford	370	....	105	....	105	52	53	59	56
41 Forest	271	....	264	....	264	134	130	193	73
42 Fort Frances	531	....	298	....	298	153	145	213	71
43 Frood Mine	85	....	80	....	80	38	42	24	30
44 Gananoque	1,000	....	791	....	791	396	395	595	75
45 Goderich	952	....	640	....	640	310	330	458	72
46 Gore Bay	241	....	180	....	180	93	87	137	76
47 Gravenhurst	446	....	420	....	420	214	206	273	65
48 Haileybury	906	....	574	....	574	290	284	400	70
49 Hanover	809	....	495	....	495	238	257	387	78
50 Harriston	352	5	291	....	296	166	130	210	71
51 Hawkesbury	1,709	....	218	....	218	115	103	144	66
52 Hespeler	546	....	512	....	512	267	245	385	75
53 Huntsville	623	....	504	....	504	255	249	355	70
54 Ingersoll	1,365	....	781	....	781	418	363	558	71
55 Iroquois Falls	101	....	109	....	109	60	49	19	17
56 Kearney	151	....	127	....	127	62	65	80	63
57 Keewatin	300	....	268	....	268	139	129	207	77
58 Kenora	1,527	....	951	....	951	467	484	705	74
59 Kincardine	537	....	238	....	238	129	109	201	84
60 Kingsville	464	....	402	....	402	224	178	268	67
61 Latchford	126	....	69	....	69	38	31	24	35
62 Leamington	690	....	579	....	579	317	262	426	74
63 Lindsay	1,866	....	1,010	....	1,010	518	492	790	78
64 Listowel	631	....	410	....	410	220	190	301	73
65 Little Current	384	....	308	....	308	138	170	168	55
66 Massey	257	....	172	....	172	107	65	97	56
67 Matheson	116	....	115	....	115	70	45	57	50
68 Mattawa	526	....	57	....	57	29	28	37	65
69 Meaford	850	....	543	....	543	285	258	423	78
70 Midland	2,107	....	1,388	....	1,388	672	716	969	70
71 Milton	592	....	463	....	463	214	249	330	71
72 Mitchell	362	....	292	....	292	146	146	221	76
73 Mount Forest	445	....	288	....	288	139	149	207	72
74 Napanee	645	....	555	....	555	268	287	367	66
75 New Liskeard	593	....	525	....	525	248	277	323	62
76 Newmarket	677	....	595	....	595	315	280	406	68
77 Niagara	375	....	233	....	233	120	113	159	68
78 North Bay	2,449	....	1,257	....	1,257	640	617	965	77
79 Oakville	620	....	535	....	535	276	259	357	67
80 Orangeville	587	....	408	....	408	205	203	307	75
81 Orillia	2,208	....	1,487	....	1,487	744	743	1,066	72
82 Oshawa	2,373	....	1,568	....	1,568	801	767	1,119	71
83 Owen Sound	3,205	....	2,158	1	2,159	1,071	1,088	1,626	75
84 Palmerston	371	1	354	....	355	173	182	244	69
85 Paris	1,005	....	583	....	583	292	291	430	74
86 Parkhill	245	....	168	....	168	84	84	128	76
87 Parry Sound	1,201	....	974	....	974	497	477	654	67
88 Pembroke	2,508	....	873	....	873	457	416	659	75
89*Penetanguishene	1,156	....	829	....	829	430	399	547	66
90 Perth	876	....	389	....	389	184	205	301	77
91 Petrolea	935	....	716	....	716	371	345	535	75

*Including Protestant Separate School.

THE PUBLIC SCHOOLS—Continued

I. TABLE A—SCHOOL POPULATION, ATTENDANCE, ETC.—Concluded

Towns—Concluded	School population between 5 and 21 years of age	Pupils under 5 years of age	Pupils between 5 and 21 years of age	Pupils over 21 years of age	Total number of pupils attending school	Boys	Girls	Average daily attendance of pupils	Percentage of average to total attendance
92 Picton	664	....	444	....	444	237	207	312	70
93 Port Hope	1,081	....	770	....	770	385	385	576	75
94 Powassan	238	....	186	....	186	98	88	127	68
95 Prescott	516	....	347	....	347	175	172	246	71
96 Preston	1,003	....	717	....	717	365	352	552	77
97 Rainy River	500	....	346	....	346	179	167	221	64
98 Renfrew	1,216	....	524	....	524	260	264	373	71
99 Ridgetown	488	....	389	....	389	167	222	252	65
100 Rockland	1,073	....	74	....	74	44	30	56	76
101 St. Mary's	913	....	632	....	632	308	324	445	70
102 Sandwich	700	....	204	....	204	103	101	170	83
103 Seaforth	362	....	265	....	265	135	130	203	77
104 Simcoe	1,010	....	715	....	715	363	352	499	70
105 Sioux Lookout	140	....	116	....	116	56	60	57	49
106 Smith's Falls	1,500	....	1,150	....	1,150	510	640	944	82
107 Southampton	487	....	367	....	367	182	185	266	72
108 Stayner	251	....	199	....	199	93	106	147	74
109 Steelton	1,423	....	863	....	863	449	414	639	74
110 Strathroy	629	....	491	....	491	262	229	396	81
111 Sturgeon Falls	842	....	236	....	236	117	119	150	64
112 Sudbury	1,536	....	689	....	689	354	335	466	68
113 Thessalon	458	....	402	....	402	205	197	258	64
114 Thornbury	182	....	149	....	149	69	80	99	66
115 Thorold	1,013	....	676	....	676	362	314	310	46
116 Tilbury	480	....	158	....	158	80	78	108	68
117 Tillsonburg	715	....	573	....	573	310	263	416	73
118 Timmins	180	....	164	....	164	85	79	55	34
119 Trenton	1,121	....	763	....	763	417	346	529	69
120 Trout Creek	139	....	112	....	112	64	48	66	59
121 Uxbridge	443	....	230	....	230	101	129	193	84
122 Vankleek Hill	370	....	151	....	151	79	72	106	70
123 Walkerton	620	....	302	....	302	168	134	216	72
124 Walkerville	1,521	....	702	....	702	367	335	491	70
125 Wallaceburg	1,286	....	628	....	628	306	322	426	68
126 Waterloo	1,142	....	632	....	632	317	315	482	76
127 Webbwood	220	....	195	....	195	98	97	102	52
128 Welland	1,455	....	1,264	....	1,264	645	619	833	65
129 Weston	580	....	484	....	484	242	242	354	73
130 Whitby	643	....	419	....	419	242	177	279	67
131 Wiarton	739	....	488	....	488	228	260	354	73
132 Wingham	510	....	374	....	374	187	187	287	77
Totals	102,863	10	64,928	2	64,940	32,820	32,120	45,878	70.64
Totals									
1 Rural Schools	299,440	390	213,831	27	214,248	111,269	102,979	130,406	60.86
2 Cities	207,770	121	132,135	12	132,268	66,692	65,576	96,695	73.10
3 Towns	102,863	10	64,928	2	64,940	32,820	32,120	45,878	70.64
4 Villages	33,902	5	26,130	2	26,137	13,195	12,942	18,148	69.43
5 Grand Totals, 1915	643,975	526	437,024	43	437,593	223,976	213,617	291,127	66.52
6 Grand Totals, 1914	636,616	456	427,058	53	427,567	218,675	208,892	275,549	64.44
7 Increases	7,359	70	9,966	....	10,026	5,301	4,725	15,576	2.08
8 Decrease	.....	....	.....	10	.....	.....	.....	.....	.....
9 Percentages	.....	.12	99.86	.01	.....	51.18	48.81	66.52	.....

THE PUBLIC

II. TABLE B—NUMBER OF PUPILS IN THE

Rural Schools	Reading					
	Primer	1st Book	2nd Book	3rd Book	4th Book	Beyond 4th Book
1 Brant	892	479	621	773	672	47
2 Bruce	1,399	765	1,120	1,235	1,210	63
3 Carleton	1,701	737	1,132	931	1,186	15
4 Dufferin	613	350	545	567	579	36
5 Dundas	678	322	534	579	626	73
6 Elgin	961	605	853	849	941	85
7 Essex	1,668	1,047	1,144	1,005	763	11
8 Frontenac	1,346	557	835	825	868	28
9 Glengarry	1,047	391	754	548	460	20
10 Grey	1,833	924	1,551	1,726	1,693	99
11 Haldimand	667	372	506	568	590	45
12 Haliburton	531	226	306	317	224	26
13 Halton	652	310	386	452	525	16
14 Hastings	1,963	935	1,553	1,203	1,032	112
15 Huron	1,201	790	1,318	1,327	1,420	242
16 Kent	1,751	861	1,334	1,250	1,252	145
17 Lambton	1,261	841	958	1,248	1,277	123
18 Lanark	795	444	578	603	683	14
19 Leeds and Grenville	1,553	809	1,163	1,118	1,500	47
20 Lennox and Addington	898	428	638	654	673	23
21 Lincoln	870	478	644	666	649	67
22 Middlesex	1,387	985	1,435	1,410	1,335	159
23 Norfolk	994	496	999	823	618	25
24 Northumberland and Durham	1,570	875	1,478	1,465	1,400	106
25 Ontario	1,339	630	1,013	967	1,200	85
26 Oxford	1,253	649	978	1,062	1,197	116
27 Peel	644	330	479	558	615	20
28 Perth	848	530	761	1,219	1,074	82
29 Peterborough	982	483	828	595	577	43
30 Prescott and Russell	1,102	456	551	520	654	114
31 Prince Edward	570	295	453	435	442	45
32 Renfrew	1,918	899	1,238	1,068	953	85
33 Simcoe	2,416	1,211	2,078	1,687	1,696	121
34 Stormont	775	343	629	475	622	8
35 Victoria	905	451	795	691	774	103
36 Waterloo	833	571	999	904	640	24
37 Welland	1,279	550	762	882	859	42
38 Wellington	972	589	840	1,027	1,141	131
39 Wentworth	1,510	740	898	1,078	980	78
40 York	4,026	2,037	2,795	2,353	1,806	103
41 Algoma	1,087	391	593	503	467	51
42 Kenora	141	93	82	84	42	1
43 Manitoulin	551	246	315	282	307	5
44 Muskoka	965	405	575	599	570	37
45 Nipissing	839	252	312	272	170	11
46 Parry Sound	1,302	554	719	658	526	98
47 Rainy River	363	168	214	227	184	34
48 Sudbury	1,145	373	423	293	204	21
49 Timiskaming	1,032	407	535	443	323	10
50 Thunder Bay, etc	670	337	364	304	281	36
Totals	57,698	29,017	42,594	41,328	40,480	3,131

SCHOOLS—Continued

VARIOUS BRANCHES OF INSTRUCTION

	Art	Geography	Music	Literature	Composition	Grammar	English History	Canadian History
1	3,400	2,872	2,976	2,878	3,083	768	1,280	1,316
2	5,536	4,758	4,572	4,898	4,792	1,744	1,954	2,526
3	5,610	4,711	3,807	5,131	5,189	1,432	2,814	2,995
4	2,566	2,173	1,559	2,382	2,275	970	1,099	1,255
5	2,627	2,156	1,452	2,314	2,411	978	1,171	1,244
6	4,224	3,482	3,649	3,679	3,691	1,482	1,692	2,083
7	5,592	3,587	3,200	4,102	4,268	1,684	1,016	1,840
8	4,459	3,126	3,179	4,459	4,459	895	1,722	2,289
9	2,933	2,251	1,748	2,620	2,654	633	1,099	1,416
10	7,422	6,115	4,747	6,608	6,631	2,037	2,870	3,252
11	2,629	2,046	1,677	2,282	2,144	1,140	1,055	1,283
12	1,337	998	775	1,493	1,119	521	469	637
13	2,277	1,701	1,770	2,035	1,846	742	794	960
14	6,453	5,131	5,632	5,950	5,871	1,310	1,709	2,512
15	5,746	4,924	4,581	5,289	5,107	2,128	2,413	2,852
16	6,449	4,842	4,423	5,157	5,600	1,825	2,399	2,759
17	5,444	4,224	3,668	5,139	5,398	1,430	2,579	2,688
18	3,009	2,214	1,231	2,466	2,322	1,023	1,065	1,288
19	5,990	4,762	4,092	5,102	5,030	2,204	2,836	2,939
20	3,204	2,554	2,262	2,901	2,811	983	1,521	1,588
21	3,100	2,529	2,758	2,690	2,406	1,226	1,285	1,647
22	6,535	5,344	5,085	5,922	5,864	1,912	2,766	2,981
23	3,872	3,154	3,027	3,392	3,473	676	1,443	1,625
24	6,438	5,192	4,753	5,766	5,581	2,341	2,375	2,817
25	5,136	3,575	3,801	4,161	4,839	1,399	2,090	2,127
26	5,050	4,434	3,170	4,692	4,881	1,488	2,020	2,569
27	2,499	1,887	1,894	2,273	2,161	678	1,075	1,197
28	4,433	3,944	4,445	4,236	4,221	2,074	1,824	2,251
29	3,314	2,718	2,186	2,736	2,743	849	1,387	1,607
30	3,251	2,644	2,601	3,058	3,023	906	1,460	1,770
31	2,080	1,819	882	1,934	2,017	611	805	850
32	5,916	4,436	2,987	5,702	5,487	1,099	2,812	3,530
33	9,069	7,825	5,809	8,356	7,815	2,593	3,104	3,921
34	2,735	2,166	1,734	2,372	2,328	855	1,151	1,268
35	3,535	3,002	2,232	3,303	3,246	991	1,237	1,365
36	3,971	3,140	3,508	3,878	3,854	951	1,125	1,544
37	3,997	3,195	2,981	3,311	3,205	1,249	1,338	1,513
38	4,171	3,473	3,117	3,954	3,751	2,224	1,886	2,227
39	4,942	3,765	4,342	3,836	3,552	1,640	2,023	2,217
40	12,759	10,091	11,967	12,146	11,622	2,990	3,707	4,864
41	2,687	2,046	1,853	2,152	2,069	759	722	997
42	435	369	219	396	400	99	152	161
43	1,522	1,042	665	1,144	1,186	609	507	731
44	2,850	2,190	1,964	2,598	2,483	1,104	1,159	1,445
45	1,358	1,133	818	1,185	1,304	403	282	617
46	3,658	2,689	2,259	2,958	2,990	848	1,123	1,440
47	1,049	754	662	837	867	388	321	502
48	1,986	1,533	1,603	1,742	1,718	585	579	919
49	2,519	1,942	2,103	2,246	2,240	371	715	1,151
50	1,962	1,865	1,554	1,779	1,779	450	631	691
	203,736	162,514	148,039	181,640	179,806	60,297	76,661	92,266

THE PUBLIC

II. TABLE B—NUMBER OF PUPILS IN THE

Rural Schools	Physiology and Hygiene	Nature Study	Physical Culture	Bookkeeping	Arithmetic and Mensuration
1 Brant	2,315	3,179	3,044	43	47
2 Bruce	4,286	4,956	5,063	111	56
3 Carleton	4,600	5,115	5,568	14	12
4 Dufferin	2,034	2,460	2,555	22	28
5 Dundas	1,755	2,434	2,137	79	67
6 Elgin	3,368	3,859	4,048	125	81
7 Essex	5,254	5,304	5,541	17	5
8 Frontenac	4,454	4,459	4,459	47	18
9 Glengarry	1,991	2,660	2,921	9	13
10 Grey	6,012	5,378	7,009	75	77
11 Haldimand	1,931	2,487	2,226	54	34
12 Haliburton	973	1,281	953	11	25
13 Halton	1,649	2,128	2,254	5	12
14 Hastings	5,628	6,170	6,277	208	90
15 Huron	4,106	5,431	5,910	225	213
16 Kent	4,678	5,633	6,264	136	120
17 Lambton	4,804	5,604	5,687	98	122
18 Lanark	2,091	2,644	2,877	9	17
19 Leeds and Grenville	4,650	5,552	5,184	29	26
20 Lennox and Addington	2,705	2,967	3,205	10	14
21 Lincoln	2,298	3,023	3,116	90	54
22 Middlesex	4,883	5,748	6,262	298	133
23 Norfolk	3,335	3,632	3,751	32	19
24 Northumberland and Durham	4,559	6,185	6,312	87	91
25 Ontario	3,085	5,007	5,110	74	70
26 Oxford	4,238	4,708	4,838	63	107
27 Peel	1,742	2,347	2,314	20	17
28 Perth	3,743	4,333	4,509	32	30
29 Peterborough	2,658	3,033	2,830	55	28
30 Prescott and Russell	2,628	3,035	3,213	167	110
31 Prince Edward	1,795	1,919	1,958	24	24
32 Renfrew	5,361	5,672	6,035	48	81
33 Simcoe	7,503	8,507	7,586	118	114
34 Stormont	1,977	2,459	2,795	2	2
35 Victoria	2,942	3,249	3,389	141	85
36 Waterloo	3,117	3,836	2,627	41	21
37 Welland	2,666	3,917	3,833	46	37
38 Wellington	3,536	4,163	4,216	143	119
39 Wentworth	3,031	4,015	4,589	61	80
40 York	9,505	11,758	13,013	79	82
41 Algoma	1,914	2,430	1,258	53	42
42 Kenora	386	388	323	1	1
43 Manitoulin	977	1,493	866	.....	.....
44 Muskoka	2,190	2,703	2,379	29	35
45 Nipissing	1,021	1,181	1,264	16	34
46 Parry Sound	2,386	3,091	3,082	106	100
47 Rainy River	746	983	852	19	26
48 Sudbury	1,484	1,777	1,755	17	17
49 Timiskaming	2,198	2,226	2,284	18	9
50 Thunder Bay, etc	1,859	1,943	1,828	35	35
Totals	159,047	188,462	191,369	3,242	2,680

SCHOOLS—Continued

VARIOUS BRANCHES OF INSTRUCTION—Continued

	Algebra	Geometry	Latin	French (beyond 4th Book)	French (Primer to 4th Book, incl.)	German (beyond 4th Book)	German (Primer to 4th Book, incl.)	Elementary Science	Commercial Subjects	Agriculture	Manual Training	Household Science
1	47	41	32	29	.....	.....	.....	38	39	449	255	285
2	52	34	13	3	11	.....	.....	22	13	859	.....	....
3	12	1	9	.....	.....	.....	.....	9	9	384	238	315
4	26	16	19	1	.....	.....	.....	6	.....	.....	.....	....
5	64	63	52	23	.....	.....	.....	63	.....	406	200	....
6	79	50	19	.....	2	.....	.....	53	35	1,047	1,161	59
7	6	4	1	1	723	1	.....	1	.....	241	266	12
8	16	.....	4	.....	.....	.....	.....	4	.....	.....	.....	....
9	9	6	6	1	129	.....	.....	3	.....	581	121	....
10	71	36	20	.....	4	.....	.....	38	9	336	147	19
11	32	18	18	1	2	.....	1	26	2	81	.....	13
12	25	21	1	.....	.....	.....	.....	17	1	.....	.....	....
13	11	4	5	2	1	.....	.....	2	.....	406	285	13
14	88	57	10	2	.....	.....	.....	45	2	556	759	422
15	208	102	92	20	.....	6	.....	151	90	768	260	50
16	119	58	6	5	219	.....	.....	80	17	885	499	6
17	102	64	53	38	7	.....	.....	82	13	285	233	70
18	16	5	7	.....	1	.....	.....	11	1	325	62	20
19	25	16	6	.....	3	.....	.....	.....	.....	334	.....	....
20	13	5	.....	.....	.....	.....	.....	.....	.....	.....	149	....
21	50	26	5	.....	.....	.....	.....	37	73	306	80	....
22	133	31	21	.....	2	.....	3	65	31	2,034	2,014	451
23	17	8	6	.....	1	.....	.....	4	2	296	429	10
24	72	36	43	18	14	.....	3	22	22	485	92	35
25	70	52	13	11	.....	.....	.....	57	26	39	1	....
26	106	46	34	7	.....	.....	.....	58	66	439	566	37
27	17	8	1	2	.....	.....	.....	2	5	401	.....	37
28	24	20	17	.....	4	.....	.....	11	6	740	171	....
29	23	17	9	5	.....	.....	.....	4	6	127	57	8
30	110	38	55	85	873	.....	2	92	1	473	516	72
31	24	1	6	3	.....	.....	.....	5	8	63	1,159	....
32	77	3	20	18	.....	.....	.....	34	.....	272	.....	....
33	107	39	11	.....	.....	.....	.....	37	28	324	250	15
34	3	2	1	.....	.....	.....	.....	.....	.....	55	.....	....
35	77	6	7	1	3	.....	.....	8	7	132	34	....
36	16	15	5	3	.....	.....	2	5	11	383	344	....
37	39	29	14	.....	.....	.....	.....	15	.....	288	276	....
38	116	64	68	16	13	1	.....	38	30	311	273	45
39	77	26	69	36	1	.....	.....	63	22	954	315	....
40	82	71	66	14	.....	.....	.....	62	16	439	255	399
41	22	2	2	.....	.....	.....	.....	21	.....	593	153	....
42	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	....
43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
44	35	18	3	.....	1	.....	.....	24	1	42	73	37
45	9	9	.....	4	736	.....	.....	1	.....	134	105	23
46	89	66	19	3	.....	.....	.....	76	3	14	.....	....
47	26	10	.....	.....	.....	.....	.....	13	2	183	54	18
48	17	15	.....	.....	616	.....	.....	11	6	149	.....	....
49	6	4	4	1	2	.....	.....	5	1	.....	60	....
50	35	35	5	3	1	.....	.....	30	4	30	.....	2
	2,501	1,299	877	356	3,369	8	11	1,452	608	17,649	11,903	2473

THE PUBLIC

II. TABLE B—NUMBER OF PUPILS IN THE

Cities	Reading					
	Primer	1st Book	2nd Book	3rd Book	4th Book	Beyond 4th Book
1 Belleville	521	276	328	366	355	.....
2 Kitchener (Berlin)	378	398	607	580	393	.....
3 Brantford	1,085	684	673	935	442	.....
4 Chatham	370	303	333	494	287	.....
5 Fort William	700	424	414	589	402	.....
6 Galt	391	245	415	414	308	.....
7 Guelph	410	237	381	531	387	131
8 Hamilton	2,845	2,121	3,674	2,707	1,992	465
9 Kingston	747	374	369	703	627	.....
10 London	1,559	1,248	2,139	1,833	1,584	.....
11 Niagara Falls	484	258	248	398	295	.....
12 Ottawa	1,571	1,276	1,999	1,678	1,869	594
13 Peterborough	668	399	537	466	559	.....
14 Port Arthur	523	399	537	411	296	.....
15 St. Catharines	622	357	314	552	479	.....
16 St. Thomas	618	293	514	558	475	.....
17 Sarnia	434	288	394	362	323	.....
18 Sault Ste. Marie	539	291	309	386	306	.....
19 Stratford	411	354	374	564	410	.....
20 Toronto	13,121	8,024	13,787	13,797	11,190	836
21 Windsor	1,053	489	547	467	378	.....
22 Woodstock	432	204	183	269	325	.....
Totals	29,482	18,942	29,076	29,060	23,682	2,026
Towns						
1 Alexandria	7	13	12	20	12	.....
2 Alliston	59	37	59	52	66	.....
3 Almonte	55	67	73	89	56	.....
4 Amherstburg	60	34	41	39	46	.....
5 Arnprior	132	70	133	141	111	.....
6 Aurora	113	51	74	117	91	.....
7 Aylmer	89	63	87	82	81	.....
8 Bala	28	9	8	10	14	.....
9 Barrie	263	149	298	207	210	.....
10 Blenheim	96	48	79	55	58	.....
11 Blind River	35	42	35	33	35	.....
12 Bothwell	29	16	29	15	37	.....
13 Bowmanville	154	85	136	123	105	.....
14 Bracebridge	197	104	113	130	80	.....
15 Brampton	124	162	164	137	104	.....
16 Brockville	447	202	191	289	299	.....
17 Bruce Mines	49	18	46	47	27	.....
18 Burlington	147	73	81	67	64	.....
19 Cache Bay	29	41	19	16	33	.....
20 Campbellford	105	118	132	98	124	.....
21 Carleton Place	294	120	93	151	86	.....
22 Charlton	42	20	9	17	16	.....
23 Chesley	106	60	71	91	78	.....
24 Clinton	97	52	57	93	106	.....
25 Cobalt	424	158	209	117	68	.....
26 Cobourg	108	78	134	99	129	.....
27 Cochrane	141	31	60	41	43	4
28 Collingwood	268	193	203	267	232	.....
29 Copper Cliff	273	93	100	50	54	.....
30 Cornwall	140	74	86	154	151	.....
31 Deseronto	135	61	90	98	82	.....
32 Dresden	119	54	38	44	53	.....
33 Dryden	60	36	54	63	33	.....

SCHOOLS—Continued

VARIOUS BRANCHES OF INSTRUCTION—Continued

	Art	Geography	Music	Literature	Composition	Grammar	English History	Canadian History
1	1,846	1,325	1,846	1,412	1,846	355	574	782
2	2,356	2,315	2,356	2,356	2,356	594	973	1,969
3	3,819	3,819	3,819	3,819	3,819	419	613	606
4	1,787	1,664	1,787	1,787	1,787	287	1,018	1,018
5	2,529	1,829	2,529	2,529	2,529	402	991	991
6	1,773	1,663	1,773	1,726	1,726	722	437	970
7	1,946	2,011	1,946	2,074	1,973	774	986	1,199
8	13,639	12,193	13,785	13,297	13,402	3,682	5,350	7,209
9	2,820	1,857	2,820	2,820	2,820	627	787	752
10	8,363	8,363	8,363	8,363	8,363	1,775	3,639	4,716
11	1,683	1,542	1,253	1,683	1,683	341	297	426
12	8,987	8,987	8,987	8,987	8,987	2,581	3,382	3,247
13	2,629	2,629	2,629	2,629	2,629	559	1,025	1,562
14	2,166	2,166	2,166	1,643	2,166	296	707	707
15	2,324	1,702	.....	1,702	1,702	479	1,031	1,031
16	2,349	2,058	2,020	2,300	2,349	461	715	972
17	1,801	1,801	1,801	1,801	1,801	323	862	862
18	1,831	1,831	1,831	1,831	1,831	363	384	665
19	2,113	2,113	2,113	2,113	2,113	620	657	1,039
20	59,116	58,140	59,215	59,056	58,836	20,321	21,038	27,650
21	2,934	1,392	2,934	2,934	2,934	378	845	845
22	1,413	981	.....	981	981	325	325	594
	130,224	122,381	125,973	127,843	128,633	36,684	46,636	59,812
1	64	57	64	57	57	12	45	45
2	273	273	273	273	273	66	60	100
3	340	340	261	340	340	56	259	259
4	220	160	220	160	160	85	46	85
5	587	587	587	587	587	111	246	375
6	446	333	446	446	333	91	91	91
7	402	402	402	250	402	149	313	313
8	69	48	69	48	48	48	28	28
9	1,127	1,127	1,127	1,127	1,127	417	407	695
10	336	240	336	336	336	58	240	240
11	180	180	145	180	180	68	180	180
12	126	126	97	97	97	37	52	52
13	603	449	603	603	603	228	263	171
14	624	392	.....	624	624	127	210	127
15	691	405	691	567	567	104	72	169
16	1,428	1,428	1,428	1,428	1,428	299	1,428	1,428
17	187	187	187	165	187	27	120	120
18	384	284	334	384	369	83	131	131
19	138	109	138	109	109	31	12	12
20	577	577	577	577	577	124	74	228
21	744	744	.....	744	744	86	330	330
22	39	61	.....	104	104	16	16	61
23	406	406	406	406	406	78	406	406
24	405	405	405	405	405	106	199	199
25	976	976	976	976	976	68	976	976
26	548	444	548	362	444	129	89	40
27	320	200	320	320	320	47	88	148
28	1,163	934	1,163	967	860	424	383	506
29	570	279	.....	570	570	104	54	104
30	605	605	605	605	605	151	191	204
31	466	270	466	338	466	82	180	180
32	308	308	308	308	308	53	97	97
33	246	200	246	186	186	96	96	150

THE PUBLIC

II. TABLE B—NUMBER OF PUPILS IN THE

Cities—Concluded	Physiology and Hygiene	Nature Study	Physical Culture	Bookkeeping	Arithmetic and Mensuration	Algebra
1 Belleville	1,846	1,846	1,846	.....	.....	.....
2 Kitchener (Berlin)	2,257	2,356	2,356	.....	.....	.....
3 Brantford	3,819	3,819	3,819	.....	.....	.....
4 Chatham	1,787	1,787	1,787	.....	.....	.....
5 Fort William	2,529	2,529	2,529	.....	.....	.....
6 Galt	1,726	1,773	1,579	.....	.....	.....
7 Guelph	1,899	1,946	2,077	131	131	.....
8 Hamilton	12,409	13,357	13,702	465	465	465
9 Kingston	2,820	2,820	2,820	.....	.....	.....
10 London	8,363	8,363	8,363	.....	.....	.....
11 Niagara Falls	1,347	1,683	1,683	.....	.....	.....
12 Ottawa	8,987	8,987	8,987	150	594	76
13 Peterborough	2,629	2,629	2,629	.....	.....	.....
14 Port Arthur	2,166	2,166	2,166	.....	.....	.....
15 St. Catharines	1,702	2,324	.....	.....	.....	.....
16 St. Thomas	2,335	2,349	2,416	.....	.....	.....
17 Sarnia	1,801	1,801	1,801	.....	.....	.....
18 Sault Ste. Marie	1,777	1,777	1,831	.....	.....	.....
19 Stratford	2,113	2,113	2,113	.....	.....	.....
20 Toronto	56,894	56,818	58,695	1,213	836	571
21 Windsor	2,934	2,934	2,934	.....	.....	.....
22 Woodstock	981	1,413	1,413	.....	.....	.....
Totals	125,121	127,590	127,546	1,959	2,026	1,112
Towns						
1 Alexandria	64	64	64	.....	.....	.....
2 Alliston	273	273	273	.....	.....	.....
3 Almonte	340	340	340	.....	.....	.....
4 Amherstburg	220	220	171	.....	.....	.....
5 Arnprior	587	587	587	.....	.....	.....
6 Aurora	446	446	446	.....	.....	.....
7 Aylmer	402	402	402	.....	402	.....
8 Bala	48	69	69	.....	.....	.....
9 Barrie	705	1,127	1,127	.....	.....	.....
10 Blenheim	240	336	336	.....	.....	.....
11 Blind River	180	180	180	.....	.....	.....
12 Bothwell	52	126	126	.....	.....	.....
13 Bowmanville	533	603	603	.....	.....	.....
14 Bracebridge	392	624	624	.....	.....	.....
15 Brampton	405	405	691	.....	.....	.....
16 Brockville	1,428	1,428	1,428	.....	.....	.....
17 Bruce Mines	187	187	187	.....	.....	.....
18 Burlington	233	334	334	.....	.....	.....
19 Cache Bay	12	138	138	12	.....	.....
20 Campbellford	577	577	577	74	.....	.....
21 Carleton Place	330	744	744	.....	.....	.....
22 Chariton	61	39	104	.....	.....	.....
23 Chesley	406	406	406	.....	.....	.....
24 Clinton	405	405	405	.....	.....	.....
25 Cobalt	976	976	976	.....	.....	.....
26 Cobourg	228	228	228	.....	.....	.....
27 Cochrane	320	320	320	47	4	4
28 Collingwood	1,046	1,103	1,163	.....	.....	.....
29 Copper Cliff	54	570	57	.....	.....	.....
30 Cornwall	605	605	605	.....	.....	.....
31 Deseronto	466	466	466	.....	.....	.....
32 Dresden	308	308	308	.....	.....	.....
33 Dryden	200	246	246	.....	.....	.....

SCHOOLS—Continued

VARIOUS BRANCHES OF INSTRUCTION—Continued

	Geometry	Latin	French (beyond 4th Book)	French (Primer to 4th Book, incl.)	German (beyond 4th Book)	German (Primer to 4th Book, incl.)	Elementary Science	Commercial Subjects	Agriculture	Manual Training	Household Science
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,125	79
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	120	116
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	579	443
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,415	925
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	241	254
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	155	153
7	.....	.....	.....	.....	.....	.....	.....	131	.....	483	564
8	177	.....	.....	.....	.....	.....	4	465	.....	1,653	1,966
9	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,820	479
10	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,116	1,228
11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12	.....	.....	.....	.....	.....	.....	32	594	.....	2,314	2,978
13	.....	.....	.....	.....	.....	.....	.....	.....	.....	140	130
14	.....	.....	.....	.....	.....	.....	.....	.....	.....	141	164
15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16	.....	.....	.....	.....	.....	.....	.....	.....	.....	494	515
17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18	.....	.....	.....	.....	.....	.....	.....	.....	.....	95	78
19	.....	.....	.....	.....	.....	.....	.....	.....	.....	526	521
20	234	.....	.....	75	.....	.....	.....	836	.....	50,551	21,550
21	.....	.....	.....	.....	.....	.....	.....	.....	.....	302	325
22	.....	.....	.....	.....	.....	.....	.....	.....	.....	325	325
	411	.....	.....	75	.....	.....	36	2,026	.....	64,595	32,793
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	13
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24
9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22	.....	.....	.....	.....	.....	.....	.....	.....	.....	39	.....
23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
27	4	.....	.....	.....	.....	.....	4	4	.....	320	.....
28	.....	.....	.....	.....	.....	.....	.....	.....	.....	240	255
29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30	.....	.....	.....	.....	.....	.....	.....	.....	.....	466	264
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

THE PUBLIC

II. TABLE B—NUMBER OF PUPILS IN THE

	Towns—Continued	Reading					
		Primer	1st Book	2nd Book	3rd Book	4th Book	Beyond 4th Book
34	Dundas	217	97	143	139	178	.....
35	Dunnville	172	69	92	83	96	.....
36	Durham	108	30	76	50	52	.....
37	Eastview	126	58	85	28	49	.....
38	Englehart	106	15	35	35	34	.....
39	Essex	67	56	85	53	49	.....
40	Ford	44	13	22	12	14	.....
41	Forest	58	46	38	62	60	.....
42	Fort Frances	72	59	57	51	59	.....
43	Frood Mine	44	7	15	7	5	2
44	Gananoque	190	117	175	174	135	.....
45	Goderich	108	59	138	154	181	.....
46	Gore Bay	33	23	44	33	35	12
47	Gravenhurst	125	60	83	72	80	.....
48	Haileybury	119	151	138	96	70	.....
49	Hanover	78	62	199	88	68	.....
50	Harriston	61	50	59	67	59	.....
51	Hawkesbury	67	24	34	46	47	.....
52	Hespeler	81	80	151	109	83	8
53	Huntsville	161	84	82	97	80	.....
54	Ingersoll	142	155	135	207	142	.....
55	Iroquois Falls	44	28	20	10	7	.....
56	Kearney	36	20	21	29	15	6
57	Keewatin	45	45	44	80	54	.....
58	Kenora	279	120	223	170	159	.....
59	Kincardine	44	33	63	37	61	.....
60	Kingsville	113	57	60	97	43	32
61	Latchford	24	12	7	12	13	1
62	Leamington	165	102	162	102	108	.....
63	Lindsay	254	132	215	213	196	.....
64	Listowel	94	40	63	107	106	.....
65	Little Current	139	55	41	33	40	.....
66	Massey	51	20	25	21	45	10
67	Matheson	35	8	20	23	27	2
68	Mattawa	5	17	9	2	20	4
69	Meaford	120	88	89	106	140	.....
70	Midland	427	228	287	257	189	.....
71	Milton	167	51	113	62	70	.....
72	Mitchell	43	30	43	85	91	.....
73	Mount Forest	80	40	45	84	39	.....
74	Napanee	144	54	136	103	118	.....
75	New Liskeard	135	83	147	80	80	.....
76	Newmarket	164	72	134	154	71	.....
77	Niagara	72	36	34	50	41	.....
78	North Bay	314	193	253	273	224	.....
79	Oakville	138	70	134	96	97	.....
80	Orangeville	87	57	77	78	109	.....
81	Orillia	327	249	298	278	335	.....
82	Oshawa	540	270	253	286	219	.....
83	Owen Sound	427	288	546	475	423	.....
84	Palmerston	105	58	85	57	50	.....
85	Paris	122	99	77	151	134	.....
86	Parkhill	31	17	40	44	36	.....
87	Parry Sound	301	122	207	191	153	.....
88	Pembroke	227	131	132	216	167	.....
89	*Penetanguishene	251	127	204	146	101	.....
90	Perth	92	47	95	55	100	.....
91	Petrolea	181	114	82	196	143	.....
92	Picton	76	56	109	98	105	.....

*Including Protestant Separate School.

SCHOOLS—Continued

VARIOUS BRANCHES OF INSTRUCTION—Continued

	Art	Geography	Music	Literature	Composition	Grammar	English History	Canadian History
34	774	557	774	664	664	317	359	462
35	512	392	.....	233	512	137	95	138
36	316	255	264	316	316	52	101	198
37	346	346	346	346	346	49	49	77
38	225	225	225	225	225	69	69	35
39	310	243	310	243	243	102	49	102
40	61	48	.....	48	48	26	14	26
41	264	215	264	264	204	95	122	122
42	226	226	298	110	298	59	110	167
43	36	29	.....	29	29	7	7	14
44	791	601	554	791	791	237	135	484
45	640	640	640	628	628	383	411	411
46	180	147	168	180	180	47	68	124
47	420	334	420	420	397	160	199	229
48	574	455	574	432	574	70	166	304
49	495	495	495	495	495	68	114	156
50	296	296	296	296	296	126	59	126
51	218	218	218	218	218	47	93	151
52	512	512	.....	512	512	91	91	200
53	396	346	504	395	395	135	217	217
54	781	781	.....	781	781	142	80	349
55	109	109	109	109	109	7	65	65
56	106	71	.....	106	80	21	38	15
57	268	223	268	268	268	54	75	178
58	951	951	951	951	951	540	540	540
59	238	238	238	238	238	61	30	31
60	402	232	163	232	232	172	75	172
61	69	45	25	65	65	26	26	32
62	579	414	579	414	414	210	108	210
63	1,010	1,010	1,010	1,010	1,010	196	409	624
64	410	296	390	410	324	296	245	245
65	272	272	308	184	27	40	114	202
66	172	121	144	172	172	76	121	101
67	115	115	115	115	115	29	52	72
68	57	57	57	57	57	25	24	24
69	543	423	543	543	543	140	76	246
70	1,388	774	1,388	1,388	1,388	376	183	288
71	463	463	463	463	403	70	132	194
72	292	219	292	292	292	176	91	176
73	288	288	.....	168	168	123	39	123
74	555	555	555	555	555	221	555	555
75	525	525	463	525	525	116	271	354
76	595	431	595	595	595	71	359	359
77	233	233	233	233	233	91	91	91
78	1,257	1,257	1,257	1,257	1,257	224	388	382
79	535	535	535	535	535	103	397	397
80	408	555	408	408	408	148	148	148
81	1,487	1,264	1,487	1,487	1,487	335	513	814
82	1,568	829	1,568	925	925	219	322	207
83	2,073	1,691	1,661	1,606	1,803	423	594	932
84	355	355	.....	355	355	107	107	107
85	583	583	583	583	583	134	583	583
86	168	168	168	168	168	36	36	36
87	974	730	974	974	974	204	483	502
88	873	873	873	873	873	167	180	155
89	829	578	829	829	829	101	253	346
90	389	389	389	297	297	100	155	155
91	567	421	400	472	716	143	339	337
92	444	368	444	444	444	105	312	312

THE PUBLIC

II. TABLE B—NUMBER OF PUPILS IN THE

Towns—Continued	Physiology and Hygiene	Nature Study	Physical Culture	Bookkeeping	Arithmetic and Mensuration	Algebra
34 Dundas	774	774	774	.....	.....	.....
35 Dunnville	512	512	458	.....	.....	.....
36 Durham	198	316	158	.....	.....	.....
37 Eastview	77	77	346	.....	.....	.....
38 Englehart	225	225	225	.....	.....	.....
39 Essex	310	310	310	.....	.....	.....
40 Ford	105	105	105	.....	.....	.....
41 Forest	264	264	264	.....	.....	.....
42 Fort Frances	226	298	.....	.....	.....	.....
43 Frood Mine	36	36	80	.....	2	2
44 Gananoque	791	791	791	.....	.....	.....
45 Goderich	538	538	640	.....	.....	.....
46 Gore Bay	168	168	180	12	12	12
47 Gravenhurst	420	420	420	.....	.....	.....
48 Haileybury	574	574	574	.....	.....	.....
49 Hanover	495	495	495	.....	.....	.....
50 Harriston	296	237	296	.....	.....	.....
51 Hawkesbury	218	218	218	.....	.....	.....
52 Hespeler	351	512	.....	8	8	8
53 Huntsville	315	395	504	.....	.....	.....
54 Ingersoll	781	781	781	80	.....	.....
55 Iroquois Falls	109	109	109	.....	.....	.....
56 Kearney	50	127	127	6	6	6
57 Keewatin	268	268	268	.....	.....	.....
58 Kenora	951	951	951	.....	.....	.....
59 Kincardine	238	238	238	.....	.....	.....
60 Kingsville	257	232	402	32	32	32
61 Latchford	32	32	52	.....	1	1
62 Leamington	579	579	579	.....	.....	.....
63 Lindsay	1,010	1,010	1,010	.....	.....	.....
64 Listowel	359	410	410	.....	.....	.....
65 Little Current	202	202	202	.....	.....	.....
66 Massey	111	157	172	22	22	22
67 Matheson	115	115	115	2	2	2
68 Mattawa	57	57	57	4	4	4
69 Meaford	543	543	543	.....	.....	.....
70 Midland	888	1,388	1,388	.....	.....	.....
71 Milton	463	463	463	.....	.....	.....
72 Mitchell	176	292	292	.....	.....	.....
73 Mount Forest	288	288	81	.....	.....	.....
74 Napanee	555	555	555	.....	.....	.....
75 New Liskeard	525	525	525	.....	.....	.....
76 Newmarket	595	595	595	.....	.....	.....
77 Niagara	233	233	233	.....	233	.....
78 North Bay	1,257	1,257	1,257	.....	.....	.....
79 Oakville	535	535	535	.....	.....	.....
80 Orangeville	408	408	408	.....	.....	.....
81 Orillia	1,487	1,487	1,487	.....	.....	.....
82 Oshawa	1,209	1,568	1,568	.....	.....	.....
83 Owen Sound	1,776	1,832	2,159	.....	.....	.....
84 Palmerston	355	355	.....	.....	.....	.....
85 Paris	583	583	583	.....	.....	.....
86 Parkhill	168	168	168	36	.....	.....
87 Parry Sound	974	974	974	.....	.....	.....
88 Pembroke	873	873	873	.....	.....	.....
89*Penetanguishene	829	829	829	.....	.....	.....
90 Perth	155	389	389	.....	.....	.....
91 Petrolea	337	716	716	.....	.....	.....
92 Picton	312	368	444	.....	.....	.....

*Including Protestant Separate School.

SCHOOLS—Continued

VARIOUS BRANCHES OF INSTRUCTION—Continued

	Geometry	Latin	French (beyond 4th Book)	French (Primer to 4th Book, incl.)	German (beyond 4th Book)	German (Primer to 4th Book, incl.)	Elementary Science	Commercial Subjects	Agriculture	Manual Training	Household Science
34											
35											
36											
37											
38											
39										67	
40											
41											
42											
43	2	2					2				
44											
45											
46		10	9				12				
47											
48											
49											
50											
51											
52	8						8	8			
53											
54										179	170
55											
56							6				
57											
58											
59											
60	32	30					32				
61											
62											
63										386	386
64										88	55
65											
66	4	22	4				22	22			
67	2	2					2			115	
68	4						4				
69											
70											
71											
72											
73											
74											
75											
76											
77											
78										989	268
79											
80										207	
81											
82											
83										266	275
84											
85										67	291
86										88	
87										115	
88											
89											
90									389		
91										600	
92										444	

THE PUBLIC

II. TABLE B—NUMBER OF PUPILS IN THE

Towns—Continued	Reading					
	Primer	1st Book	2nd Book	3rd Book	4th Book	Beyond 4th Book
93 Port Hope	206	131	113	171	149	.....
94 Powassan	41	32	46	29	38	.....
95 Prescott	83	29	79	43	113	.....
96 Preston	140	124	192	146	115	.....
97 Rainy River	158	37	57	49	19	26
98 Renfrew	131	64	116	94	119	.....
99 Ridgetown	100	41	90	86	72	.....
100 Rockland	21	15	11	10	17	.....
101 St. Mary's	163	81	78	163	147	.....
102 Sandwich	52	47	50	32	23	.....
103 Seaforth	51	40	60	62	52	.....
104 Simcoe	162	120	199	120	114	.....
105 Sioux Lookout	51	25	20	15	5	.....
106 Smith's Falls	340	185	275	180	170	.....
107 Southampton	73	35	94	99	66	.....
108 Stayner	43	46	43	26	41	.....
109 Steelton	341	132	176	131	83	.....
110 Strathroy	94	51	112	108	126	.....
111 Sturgeon Falls	96	22	43	55	20	.....
112 Sudbury	207	104	120	148	110	.....
113 Thessalon	120	69	72	71	70	.....
114 Thornbury	34	17	35	28	35	.....
115 Thorold	235	72	149	126	94	.....
116 Tilbury	41	12	29	41	35	.....
117 Tillsonburg	131	78	94	100	170	.....
118 Timmins	95	18	24	18	9	.....
119 Trenton	222	134	133	179	95	.....
120 Trout Creek	28	11	30	19	16	8
121 Uxbridge	77	26	32	57	38	.....
122 Vankleek Hill	44	17	24	24	42	.....
123 Walkerton	77	43	61	69	52	.....
124 Walkerville	192	112	138	118	142	.....
125 Wallaceburg	163	104	81	152	128	.....
126 Waterloo	98	84	134	172	144	.....
127 Webbwood	67	24	41	32	31	.....
128 Welland	353	207	273	259	172	.....
129 Weston	71	111	99	96	107	.....
130 Whitby	120	47	77	89	86	.....
131 Wiarton	93	70	101	126	98	.....
132 Wingham	57	55	94	90	78	.....
Totals	17,374	9,688	13,128	12,905	11,730	115
Totals						
1 Rural Schools	57,698	29,017	42,594	41,328	40,480	3,131
2 Cities	29,482	18,942	29,076	29,060	23,682	2,026
3 Towns	17,374	9,688	13,128	12,905	11,730	115
4 Villages	6,837	3,730	5,321	4,983	5,012	254
5 Grand Totals, 1915	111,391	61,377	90,119	88,276	80,904	5,526
6 Grand Totals, 1914	111,815	60,441	87,912	84,755	77,264	5,380
7 Increases	.....	936	2,207	3,521	3,640	146
8 Decreases	424	.....	.....	.....	.....	.....
9 Percentages	25.45	14.02	20.59	20.17	18.49	1.26

SCHOOLS—Continued

VARIOUS BRANCHES OF INSTRUCTION—Continued

	Art	Geography	Music	Literature	Composition	Grammar	English History	Canadian History
93	770	770	770	564	433	320	80	149
94	186	145	186	186	186	67	67	67
95	347	283	347	347	347	91	71	235
96	717	717	717	717	717	261	261	115
97	346	188	346	346	346	45	188	188
98	524	393	524	524	524	119	311	311
99	389	389	389	248	289	72	208	208
100	74	74	74	74	74	17	38	38
101	632	388	388	388	632	310	147	310
102	204	204	204	204	204	23	55	55
103	214	214	265	214	214	52	114	114
104	715	715	715	715	715	114	324	308
105	116	65	90	65	65	26	3	2
106	900	690	1,150	1,150	960	610	70	80
107	367	367	367	367	367	66	259	259
108	156	156	.....	156	156	67	67	110
109	863	863	863	863	863	83	55	79
110	491	491	491	397	491	126	448	491
111	236	236	236	236	236	20	53	22
112	689	689	689	689	689	103	115	100
113	402	272	402	272	203	70	36	34
114	149	115	149	98	98	50	35	50
115	676	369	584	584	676	369	83	220
116	158	105	158	105	158	90	105	105
117	573	442	573	573	573	173	121	132
118	164	69	164	164	164	27	.....	69
119	763	763	763	763	763	95	95	274
120	112	84	112	112	112	24	112	112
121	230	230	230	230	230	38	95	95
122	151	100	151	151	151	43	37	43
123	302	302	302	244	202	84	84	89
124	702	443	702	482	482	142	142	260
125	628	465	628	628	628	128	280	361
126	632	632	632	450	632	316	90	144
127	195	121	195	195	195	31	104	104
128	1,264	911	1,264	1,264	1,264	482	482	482
129	484	302	484	484	302	203	107	144
130	374	299	419	324	299	104	157	157
131	488	325	390	395	395	93	59	93
132	374	374	374	374	374	128	168	168
	63,878	56,118	57,730	58,923	59,877	17,048	23,845	29,029
1	203,736	162,514	148,039	181,640	179,806	60,297	76,661	92,266
2	130,224	122,381	125,973	127,843	128,633	36,684	46,636	59,812
3	63,878	56,118	57,730	58,923	59,877	17,048	23,845	29,029
4	25,325	21,623	21,863	23,464	23,651	7,834	9,467	11,290
5	423,163	362,636	353,605	391,870	391,967	121,863	156,609	192,397
6	410,883	354,829	329,851	374,266	376,382	131,712	160,400	194,055
7	12,280	7,807	23,754	17,604	15,585	.....	.....	.....
8	.....	.....	.....	.....	.....	9,849	3,791	1,658
9	96.70	82.87	80.80	89.55	89.57	27.84	35.78	43.96

THE PUBLIC

II. TABLE B—NUMBER OF PUPILS IN THE

Towns—Concluded	Physiology and Hygiene	Nature Study	Physical Culture	Bookkeeping	Arithmetic and Mensuration	Algebra
93 Port Hope	770	770	770	.....	.....	.....
94 Powassan	186	186	186	67	.....	.....
95 Prescott	347	347	347	.....	.....	.....
96 Preston	261	717	717	.....	.....	.....
97 Rainy River	320	320	346	.....	26	26
98 Renfrew	411	524	524	.....	.....	.....
99 Ridgetown	389	389	389	.....	.....	.....
100 Rockland	74	74	74	.....	.....	.....
101 St. Mary's	310	632	388	.....	.....	.....
102 Sandwich	204	204	204	.....	.....	.....
103 Seaforth	114	214	214	.....	.....	.....
104 Simcoe	715	715	715	68	.....	.....
105 Sioux Lookout	26	65	116	.....	.....	.....
106 Smith's Falls	860	740	1,150	.....	.....	.....
107 Southampton	367	367	367	.....	.....	.....
108 Stayner	67	110	156	.....	.....	.....
109 Steelton	245	863	863	.....	.....	.....
110 Strathroy	491	491	491	.....	.....	.....
111 Sturgeon Falls	236	236	236	.....	.....	.....
112 Sudbury	689	689	689	.....	.....	.....
113 Thessalon	203	402	402	2	.....	.....
114 Thornbury	149	98	149	.....	.....	.....
115 Thorold	262	469	595	.....	.....	.....
116 Tilbury	105	105	158	.....	.....	.....
117 Tillsonburg	442	442	573	.....	.....	.....
118 Timmins	164	164	164	9	.....	.....
119 Trenton	763	763	763	.....	.....	.....
120 Trout Creek	112	112	43	8	8	8
121 Uxbridge	230	230	230	.....	.....	.....
122 Vankleek Hill	151	151	151	.....	.....	.....
123 Walkerton	213	147	208	.....	.....	.....
124 Walkerville	298	702	702	.....	.....	.....
125 Wallaceburg	465	465	628	.....	.....	.....
126 Waterloo	316	632	632	.....	.....	.....
127 Webbwood	104	195	195	.....	.....	.....
128 Welland	911	1,264	1,264	.....	.....	.....
129 Weston	203	413	484	.....	.....	.....
130 Whitby	239	259	384	.....	.....	.....
131 Wiarton	264	488	488	.....	.....	.....
132 Wingham	374	374	374	.....	.....	.....
Totals	53,315	61,167	61,636	489	762	127
Totals						
1 Rural Schools	159,047	188,462	191,369	3,242	2,680	2,501
2 Cities	125,121	127,590	127,546	1,959	2,026	1,112
3 Towns	53,315	61,167	61,636	489	762	127
4 Villages	20,758	23,548	23,201	507	268	230
5 Grand Totals, 1915	358,241	400,767	403,752	6,197	5,736	3,970
6 Grand Totals, 1914	345,098	389,914	389,636	8,899	5,362	3,194
7 Increases	13,143	10,853	14,116	.....	374	776
8 Decreases	.....	.....	.....	2,702	.....	.....
9 Percentages	81.86	91.58	92.26	1.41	1.31	.90

SCHOOLS—Continued

VARIOUS BRANCHES OF INSTRUCTION—Concluded

	Geometry	Latin	French (beyond 4th Book)	French (Primer to 4th Book, incl.)	German (beyond 4th Book)	German (Primer to 4th Book, incl.)	Elementary Science	Commercial Subjects	Agriculture	Manual Training	Household Science
93	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
94	.....	.....	.....	.....	.....	.....	.....	.....	.....	78	.....
95	.....	.....	.....	.....	.....	.....	.....	.....	.....	234	148
96	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
97	17	23	21	.....	.....	.....	26	.....	.....	.....	.....
98	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
99	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
101	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
102	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
103	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
104	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
105	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
106	.....	.....	.....	.....	.....	.....	.....	.....	.....	130	325
107	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
108	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
109	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
110	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
111	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
112	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
113	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
114	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
115	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
116	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
117	.....	.....	.....	.....	.....	.....	.....	.....	.....	573	364
118	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
119	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
120	.....	.....	.....	.....	.....	.....	8	8	.....	.....	.....
121	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
122	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
123	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
124	.....	.....	.....	.....	.....	.....	.....	.....	.....	91	98
125	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
126	.....	.....	.....	.....	.....	632	.....	.....	.....	59	31
127	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
128	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
129	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
130	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
131	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
132	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	73	89	34	.....	.....	632	126	42	389	5,856	2,967
1	1,299	877	356	3,369	8	11	1,452	608	17,649	11,903	2,473
2	411	.....	.....	75	.....	.....	36	2,026	.....	64,595	32,793
3	73	89	34	.....	.....	632	126	42	389	5,856	2,967
4	152	122	83	232	8	.....	206	34	1,350	1,598	110
5	1,935	1,088	473	3,676	16	643	1,820	2,710	19,388	83,952	38,343
6	2,503	862	689	4,040	18	2,282	2,232	2,814	17,054	79,954	34,704
7	.....	226	.....	.....	.....	.....	.....	.....	2,334	3,998	3,639
8	568	.....	216	364	2	1,639	412	104	.....	.....	.....
9	.44	.24	.10	.84	.....	.14	.41	.61	4.43	19.18	8.76

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III. TABLE C—TEACHERS, SALARIES,

Rural Schools	Teachers			Salaries	
	Number of Teachers	Male	Female	Highest salary, male	Highest salary, female
1 Brant	87	12	75	$1,000	$850
2 Bruce	175	29	146	1,000	750
3 Carleton	145	16	129	1,000	850
4 Dufferin	93	12	81	750	650
5 Dundas	83	21	62	900	715
6 Elgin	118	15	103	800	750
7 Essex	120	26	94	1,000	750
8 Frontenac	148	20	128	800	700
9 Glengarry	79	11	68	650	650
10 Grey	229	43	186	875	700
11 Haldimand	77	17	60	900	700
12 Haliburton	61	6	55	900	600
13 Halton	60	3	57	700	750
14 Hastings	193	35	158	1,000	750
15 Huron	199	37	162	1,000	1,050
16 Kent	139	12	127	750	750
17 Lambton	175	29	146	975	700
18 Lanark	126	9	117	625	675
19 Leeds and Grenville	233	36	197	800	700
20 Lennox and Addington	118	12	106	650	650
21 Lincoln	75	12	63	850	800
22 Middlesex	198	30	168	725	725
23 Norfolk	104	21	83	750	700
24 Northumberland and Durham	210	38	172	850	725
25 Ontario	129	20	109	800	700
26 Oxford	130	26	104	900	785
27 Peel	81	11	70	800	760
28 Perth	120	20	100	825	750
29 Peterborough	107	18	89	650	700
30 Prescott and Russell	99	11	88	900	800
31 Prince Edward	77	11	66	750	700
32 Renfrew	162	13	149	800	700
33 Simcoe	228	48	180	900	700
34 Stormont	82	3	79	650	750
35 Victoria	113	16	97	750	670
36 Waterloo	101	25	76	900	750
37 Welland	98	18	80	1,200	800
38 Wellington	152	22	130	1,225	725
39 Wentworth	109	16	93	1,100	750
40 York	259	35	224	1,450	1,000
41 Algoma	74	14	60	750	700
42 Kenora	17	6	11	600	600
43 Manitoulin	47	10	37	700	650
44 Muskoka	109	11	98	600	625
45 Nipissing	54	5	49	600	650
46 Parry Sound	130	19	111	1,000	700
47 Rainy River	44	13	31	850	700
48 Sudbury	58	10	48	1,000	700
49 Timiskaming	70	18	52	1,150	850
50 Thunder Bay, etc	57	18	39	1,300	900
1 Totals, Rural Schools	5,952	939	5,013	1,450	1,050
2 " Cities	2,711	409	2,302	2,400	2,000
3 " Towns	1,274	143	1,131	1,800	1,200
4 " Villages	524	93	431	1,825	875
5 Grand Totals, 1915	10,461	1,584	8,877	2,400	2,000
6 Grand Totals, 1914	10,202	1,536	8,666	2,400	2,000
7 Increases	259	48	211	.....	.....
8 Decreases	.....	.....	.....	.....	.....
9 Percentages	.....	15.14	84.85	.....	.....

SCHOOLS—Continued

CERTIFICATES, EXPERIENCE, ETC.

Salaries—Continued

	Average salary of male teachers	Average salary of female teachers	Average salary, male teachers with I Class certificates	Average salary, female teachers with I Class certificates	Average salary, male teachers with II Class certificates	Average salary, female teachers with II Class certificates	Average salary, male teachers with III or District certificates
1	$702	$587	.....	$616	$732	$584	$550
2	594	576	$600	600	636	597	514
3	652	565	600	650	675	587	600
4	579	578	675	600	608	596	559
5	677	604	600	550	681	605	.....
6	668	588	.....	629	668	591	.....
7	656	593	.....	644	678	665	596
8	483	450	800	558	600	576	467
9	536	530	.....	550	600	587	512
10	594	565	675	550	630	593	530
11	628	562	900	600	621	576	581
12	558	377	.....	.....	800	550	467
13	650	607	.....	580	650	512	.....
14	596	531	725	610	669	605	497
15	650	580	662	695	653	582	500
16	641	618	725	626	641	619	550
17	643	595	656	597	649	599	550
18	471	468	.....	600	.....	561	504
19	522	503	700	550	625	563	484
20	479	463	.....	562	600	574	521
21	690	587	600	656	710	590	575
22	614	581	.....	590	614	582	.....
23	615	563	600	587	642	574	540
24	636	567	633	630	648	581	600
25	632	579	600	579	637	590	625
26	712	598	787	652	706	595	.....
27	648	594	633	590	653	602	.....
28	673	594	675	625	673	596	.....
29	546	526	600	.....	605	577	532
30	566	505	.....	675	733	542	504
31	562	535	.....	625	655	564	484
32	550	476	.....	642	694	556	518
33	631	569	629	578	648	594	603
34	608	552	.....	.....	637	572	550
35	628	559	.....	550	662	595	525
36	674	598	700	600	670	603	.....
37	697	571	.....	629	719	567	525
38	653	597	875	627	673	600	542
39	743	597	700	616	746	600	.....
40	771	613	1,350	631	767	618	550
41	572	488	.....	.....	603	587	516
42	547	484	.....	.....	550	450	545
43	466	465	.....	650	562	575	456
44	484	408	.....	.....	600	504	475
45	515	418	.....	.....	600	567	494
46	538	451	750	600	720	531	437
47	609	529	850	.....	740	589	550
48	770	475	800	700	810	580	800
49	643	559	900	700	860	630	567
50	589	579	.....	800	640	657	610
1	621	549	703	616	669	591	526
2	1,502	779	1,629	755	1,288	783	.....
3	1,067	586	1,212	583	1,040	588	650
4	840	540	1,080	563	813	545	400
5	902	613	1,433	668	830	647	526
6	875	604	1,411	674	834	645	553
7	27	9	22	.....	.....	2	.....
8	.....	.....	.....	6	4	.....	27
9	.....	.....	.....	.....	.....	.....	.....

THE PUBLIC
III. TABLE C—TEACHERS, SALARIES,

Rural Schools—Continued	Salaries—Continued			
	Average salary, female teachers with III or District certificates	Average salary, male teachers with Temporary certificates	Average salary, female teachers with Temporary certificates	Number who have ever attended a Model School in Ontario
1 Brant	.....	.....	.....	10
2 Bruce	$481	$462	$418	23
3 Carleton	481	450	453	23
4 Dufferin	541	.....	.....	27
5 Dundas	600	.....	.....	17
6 Elgin	508	.....	.....	13
7 Essex	506	.....	450	21
8 Frontenac	428	325	352	96
9 Glengarry	484	.....	500	38
10 Grey	517	.....	417	95
11 Haldimand	523	.....	.....	27
12 Haliburton	396	350	346	20
13 Halton	550	.....	.....	13
14 Hastings	470	456	413	89
15 Huron	525	.....	425	62
16 Kent	565	.....	.....	14
17 Lambton	508	.....	.....	29
18 Lanark	432	445	388	57
19 Leeds and Grenville	459	450	403	119
20 Lennox and Addington	439	405	379	52
21 Lincoln	512	.....	.....	16
22 Middlesex	500	.....	.....	25
23 Norfolk	498	.....	.....	36
24 Northumberland & Durham	520	.....	479	67
25 Ontario	492	.....	500	9
26 Oxford	500	.....	.....	18
27 Peel	481	.....	.....	2
28 Perth	508	.....	.....	13
29 Peterborough	495	358	378	34
30 Prescott and Russell	481	.....	429	51
31 Prince Edward	469	.....	.....	28
32 Renfrew	461	372	393	103
33 Simcoe	508	542	512	60
34 Stormont	494	.....	.....	36
35 Victoria	486	.....	358	31
36 Waterloo	483	.....	.....	26
37 Welland	554	.....	.....	31
38 Wellington	556	.....	525	31
39 Wentworth	543	.....	.....	7
40 York	509	.....	.....	77
41 Algoma	488	.....	432	50
42 Kenora	490	550	494	9
43 Manitoulin	463	400	399	30
44 Muskoka	441	445	370	62
45 Nipissing	442	.....	358	19
46 Parry Sound	440	500	407	83
47 Rainy River	557	530	475	21
48 Sudbury	507	450	401	20
49 Timiskaming	521	496	523	27
50 Thunder Bay, etc	551	433	531	37
1 Totals, Rural Schools	476	454	405	1,904
2 " Cities	691	.....	.....	1,637
3 " Towns	545	.....	662	611
4 " Villages	454	.....	500	186
5 Grand Totals, 1915	479	454	408	4,338
6 Grand Totals, 1914	494	457	412	4,418
7 Increases	.....	.....	.....	.....
8 Decreases	15	3	4	80
9 Percentages	.....	.....	.....	41.46

SCHOOLS—Continued
CERTIFICATES, EXPERIENCE, ETC.—Continued

	Number who have ever attended a Normal School in Ontario	Number who have ever attended the Normal College or F. of E. in Ontario	Number of University Graduates	Certificates				
				1st Class or Interim 1st Class	2nd Class or Interim 2nd Class	3rd Class	District	Temporary
1	77	8	.....	8	77	2	.....	.....
2	136	7	.....	7	136	20	3	9
3	111	7	1	7	108	17	3	10
4	61	5	.....	6	54	33	.....	.....
5	79	3	.....	3	79	.....	1	.....
6	109	4	.....	6	106	6	.....	.....
7	89	9	.....	8	91	20	.....	1
8	40	4	.....	4	34	39	39	32
9	35	1	1	2	32	42	1	2
10	143	7	.....	7	143	75	1	3
11	54	3	.....	3	53	21	.....	.....
12	4	.....	.....	.....	4	10	18	29
13	54	5	.....	6	53	1	.....	.....
14	95	8	1	8	91	42	29	23
15	175	8	.....	9	174	15	.....	1
16	115	20	.....	20	114	5	.....	.....
17	154	16	1	17	150	7	1	.....
18	42	2	1	2	41	37	10	36
19	100	5	3	5	97	112	1	18
20	28	7	.....	6	27	38	13	34
21	71	5	.....	5	63	7	.....	.....
22	193	5	.....	5	192	1	.....	.....
23	80	9	2	9	76	18	1	.....
24	151	13	.....	13	146	43	2	6
25	112	8	.....	8	108	12	.....	1
26	101	10	.....	10	119	1	.....	.....
27	69	10	.....	8	69	4	.....	.....
28	114	3	.....	3	114	3	.....	.....
29	63	1	.....	1	53	30	9	14
30	43	6	2	6	36	36	.....	21
31	41	7	3	6	41	30	.....	.....
32	38	4	2	3	36	76	25	22
33	157	13	2	15	151	55	.....	7
34	64	1	.....	.....	61	20	1	.....
35	81	2	.....	2	79	26	3	3
36	88	8	.....	7	91	3	.....	.....
37	87	5	1	6	85	7	.....	.....
38	118	17	.....	16	114	21	.....	1
39	96	7	2	8	94	7	.....	.....
40	231	17	3	17	229	13	.....	.....
41	13	.....	.....	.....	15	27	22	10
42	3	.....	.....	.....	3	5	4	5
43	4	1	.....	1	4	12	23	7
44	9	.....	.....	.....	8	35	40	26
45	7	.....	.....	.....	7	12	12	23
46	22	4	.....	4	21	44	37	24
47	7	1	.....	1	7	6	13	17
48	12	2	.....	2	12	17	5	22
49	22	3	.....	2	21	23	3	21
50	12	2	.....	2	12	20	12	11
1	3,812	293	25	294	3,731	1,156	332	439
2	2,251	513	103	540	2,158	13	.....	.....
3	1,123	113	8	125	1,100	41	4	4
4	451	47	7	45	450	23	5	1
5	7,637	966	143	1,004	7,439	1,233	341	444
6	7,030	803	108	846	6,859	1,461	298	738
7	607	163	35	158	580	.....	43	.....
8	.....	.....	.....	.....	.....	228	.....	294
9	73.	9.23	1.36	9.59	71.11	11.78	3.26	4.24

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III. TABLE C—TEACHERS, SALARIES,

Experience

—	Average experience in years of male teachers	Average experience in years of female teachers	Average experience in years of all teachers	Average experience, male teachers with I Class certificates	Average experience, female teachers with I Class certificates
1 Totals, Rural Schools	8.15	4.18	4.81	6.55	3.44
2 " Cities	16.63	12.92	13.48	15.09	8.28
3 " Towns	19.02	10.18	11.18	21.01	6.62
4 " Villages	16.92	8.44	9.95	6.81	2.53
5 Grand Totals, 1915	11.84	7.42	8.09	13.88	5.97
6 Grand Totals, 1914	11.25	7.28	7.88	13.27	6.52
7 Increases	.59	.14	.21	.61	.....
8 Decreases	.....	.....	.....	.....	.55
9 Percentages	.....	.....	.....	.....	.....

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III. TABLE C—TEACHERS, SALARIES,

Experience—Continued

—	2 Years, but less than 3 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	11 Years	12 Years	13 Years	14 Years	15 Years	16 Years
1 Totals, Rural Sch's	856	596	403	305	296	203	144	97	104	73	72	34	43	52	41
2 " Cities	125	152	141	144	160	113	129	102	107	84	80	92	95	80	75
3 " Towns	113	101	83	75	86	80	54	35	44	29	29	26	40	30	29
4 " Villages	37	65	35	31	31	31	23	12	10	12	13	12	4	6	8
5 Grand Totals, 1915	1,131	914	662	555	573	427	350	246	265	198	194	164	182	168	153
6 Grand Totals, 1914	1,078	772	577	689	529	395	308	240	260	182	194	204	154	179	150
7 Increases	53	142	85	....	44	32	42	6	5	16	....	....	28	....	3
8 Decreases	.....	.....	....	134	....	....	....	....	....	....	....	40	....	11	....
9 Percentages	10.81	8.74	6.33	5.3	5.48	4.08	3.35	2.35	2.53	1.89	1.85	1.57	1.74	1.61	1.46

SCHOOLS—Continued

CERTIFICATES, EXPERIENCE, ETC.—Continued

Experience—Continued

	Average experience, male teachers with II Class certificates	Average experience, female teachers with II Class certificates	Average experience, male teachers with III or District certificates	Average experience, female teachers with III or District certificates	Average experience, male teachers with Temporary certificates	Average experience, female teachers with Temporary certificates	Number of teachers who at end of year had taught less than a year	One year but less than two years
1	10.34	4.72	4.73	3.76	2.17	1.60	1,183	1,088
2	19.21	13.45	.....	32.23	.....	.....	40	87
3	18.57	10.40	21.25	13.86	.....	5.25	52	71
4	18.29	8.96	16.50	9.10	.....	1.50	34	45
5	13.52	8.51	4.84	4.48	2.17	1.64	1,309	1,291
6	13.80	8.63	4.69	4.46	1.45	1.78	1,396	1,365
7	.....	.....	.15	.02	.72	.....	.....	.....
8	.28	.12	.....	.....	.....	.14	87	74
9	.....	.....	.....	.....	.....	.....	12.51	12.34

SCHOOLS—Continued

CERTIFICATES, EXPERIENCE, ETC.—Concluded

Experience—Concluded

	17 Years	18 Years	19 Years	20 Years	21 Years	22 Years	23 Years	24 Years	25 Years	26 Years	27 Years	28 Years	29 Years	30 Years	31 Years	32 Years	33 Years	34 Years	35 Years	36 Years	37 Years	38 Years	39 Years	40 Years or over
1	40	36	28	44	20	25	15	14	14	16	12	6	6	14	15	10	1	7	10	3	3	6	4	13
2	82	60	59	40	49	48	43	51	38	24	40	56	43	51	33	30	24	23	14	22	22	7	10	36
3	25	19	22	19	19	14	14	7	20	18	15	12	7	10	11	6	8	5	8	5	2	4	4	23
4	7	18	8	9	7	5	1	4	4	3	4	3	6	9	3	1	6	1	5	3	1	1	...	6
5	154	133	117	112	95	92	73	76	76	61	71	77	62	84	62	47	39	36	37	33	28	18	18	78
6	138	122	77	103	99	86	72	75	63	76	84	72	65	63	45	42	33	35	44	23	21	15	9	68
7	16	11	40	9	...	6	1	1	13	...	...	5	...	21	17	5	6	1	...	10	7	3	9	10
8	....	....	....	....	4	...	...	...	...	15	13	...	3	...	...	...	...	...	7	...	...	...	...	....
9	1.47	1.27	1.12	1.07	.91	.88	.69	.72	.72	.58	.68	.73	.59	.8	.59	.45	.37	.34	.35	.31	.26	.17	.17	.74

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IV. TABLE D—SCHOOL

Rural Schools	School Houses						School Visits				
	Number of Schools	Brick	Stone	Concrete	Frame	Log	By Inspectors	By Trustees	By Clergymen	By other persons	Total
1 Brant	62	49	2	1	10		158	86	27	405	676
2 Bruce	167	113	16	1	37		346	74	19	121	560
3 Carleton	118	32	17	6	59	4	241	50	25	161	477
4 Dufferin	92	63	4	2	23		188	60	29	92	369
5 Dundas	75	8	8	2	57		182	55	23	130	390
6 Elgin	104	84			20		264	119	29	192	604
7 Essex	108	40	3	4	61		233	90	40	107	470
8 Frontenac	144	13	20		106	5	334	115	39	82	570
9 Glengarry	75	4		3	68		195	37	26	43	301
10 Grey	222	128	50	2	41	1	449	120	72	199	840
11 Haldimand	74	64		2	8		154	76	3	108	341
12 Haliburton	59	2	3		48	6	120	63	69	195	447
13 Halton	57	30	13	5	9		129	44	7	74	254
14 Hastings	178	59	14	2	102	1	401	160	83	1,062	1,706
15 Huron	184	117	8	4	55		396	168	49	543	1,156
16 Kent	131	91			40		288	71	67	230	656
17 Lambton	167	94	1	1	71		352	101	81	322	856
18 Lanark	121	20	12		84	5	257	66	32	321	676
19 Leeds & Grenville	223	63	73	3	80	4	442	80	27	176	725
20 Lennox and Addington	111	22	7	4	77	1	230	102	32	148	512
21 Lincoln	64	34	7	1	22		131	84	23	579	817
22 Middlesex	182	142			40		386	137	50	273	846
23 Norfolk	98	68	6	5	19		234	68	17	149	468
24 Northumberland & Durham	203	142	10	3	48		450	218	76	475	1,219
25 Ontario	117	76	1	1	39		272	82	49	153	556
26 Oxford	107	90	4	1	12		287	150	36	132	605
27 Peel	74	53	7	4	10		181	108	29	147	465
28 Perth	111	91	5		15		309	195	163	245	912
29 Peterborough	99	48	3	3	40	5	242	66	64	147	519
30 Prescott and Russell	84	10		1	63	10	177	61	45	111	394

SCHOOLS—Continued

HOUSES, PRAYERS, ETC.

	Maps and Globes		Examinations, Prizes		Lectures								
	Number of Maps	Number of Globes	Number of Schools holding Public Examinations	Number of Schools distributing Prizes or Merit Cards	By Inspectors	By other persons	Total	Number of Trees planted on Arbor Day	Number of Schools using authorized Scripture Selections	Number of Schools using the Bible	Number of Schools in which passages are memorized	Number of Schools opened and closed with Prayer	No. of Schools where Religious Instruction is given by Clergymen or their representatives
1	799	75	31	14	.....	3	3	7	32	52	9	62	.....
2	1,948	181	79	18	.....	.....	.....	65	82	141	65	164	.....
3	1,199	119	25	19	.....	2	2	103	55	83	13	117	.....
4	916	91	16	12	2	.....	2	153	40	82	24	88	.....
5	858	95	25	7	.....	7	7	29	39	49	16	71	5
6	1,168	119	33	10	.....	4	4	84	57	69	19	97	3
7	1,298	118	42	16	.....	4	4	68	41	76	86	86	6
8	931	138	38	35	3	5	8	106	52	114	45	141	6
9	730	80	11	13	2	.....	2	104	24	16	9	66	3
10	2,544	243	32	18	1	1	2	197	77	187	62	214	3
11	886	89	25	5	1	.....	1	13	45	42	31	74	.....
12	470	56	10	14	.....	2	2	66	35	42	20	55	10
13	697	64	20	15	.....	.....	.....	40	24	46	17	56	.....
14	2,100	194	80	50	25	7	32	201	75	136	32	173	9
15	1,945	198	63	26	.....	6	6	216	95	154	54	180	.....
16	1,563	140	123	3	1	1	2	55	81	89	38	129	2
17	1,899	177	56	33	.....	4	4	101	83	112	73	165	.....
18	1,010	123	45	34	11	41	52	83	92	40	15	119	.....
19	2,187	224	43	29	.....	.....	.....	69	118	96	20	198	.....
20	1,057	123	20	19	1	.....	1	76	34	62	30	106	1
21	645	79	24	7	3	7	10	50	39	37	21	63	.....
22	2,176	213	87	38	.....	9	9	31	81	139	87	182	2
23	965	104	25	16	1	1	2	88	53	71	32	81	1
24	2,119	215	68	28	5	5	10	95	108	136	51	187	5
25	1,313	122	30	15	.....	6	6	90	47	84	27	111	1
26	1,355	127	41	20	.....	3	3	25	64	49	30	105	1
27	967	77	5	12	5	5	10	78	28	44	17	73	.....
28	1,380	126	68	3	26	11	37	68	86	53	21	104	.....
29	770	98	39	21	.....	2	2	26	29	56	21	85	2
30	865	90	14	14	.....	1	1	113	24	38	13	79	2

THE PUBLIC

IV. TABLE D—SCHOOL

Rural Schools—Concluded	School Houses						School Visits				
	Number of Schools	Brick	Stone	Concrete	Frame	Log	By Inspectors	By Trustees	By Clergymen	By other persons	Total
31 Prince Edward	76	35	12	1	28	.....	183	58	16	153	410
32 Renfrew	151	49	1	3	85	13	356	111	62	138	667
33 Simcoe	208	140	2	17	49	.....	455	191	65	217	928
34 Stormont	75	2	.....	2	70	1	184	19	18	92	313
35 Victoria	104	74	4	....	26	.....	280	86	65	191	622
36 Waterloo	82	64	13	....	5	.....	212	168	19	404	803
37 Welland	78	47	6	5	20	.....	195	75	21	266	557
38 Wellington	141	93	37	4	7	.....	339	136	59	224	758
39 Wentworth	75	53	14	1	7	.....	218	112	44	198	572
40 York	161	122	1	2	36	.....	311	235	71	243	860
41 Algoma	72	9	1	2	56	4	155	90	30	140	415
42 Kenora	17	.....	.....	....	14	3	27	32	5	17	81
43 Manitoulin	45	3	2	7	30	3	98	30	36	59	223
44 Muskoka	105	25	2	1	67	10	212	86	65	155	518
45 Nipissing	51	3	.....	....	39	9	75	53	54	82	264
46 Parry Sound	119	13	2	3	86	15	247	123	59	264	693
47 Rainy River	43	1	.....	1	31	10	80	53	24	186	343
48 Sudbury	55	4	.....	....	48	3	100	79	55	28	262
49 Timiskaming	64	3	.....	....	54	7	124	94	66	64	348
50 Thunder Bay, etc.	49	6	.....	....	36	7	90	123	42	109	364
Totals											
1 Rural Schools	5,382	2,596	391	110	2,158	127	11,969	4,860	2,207	10,352	29,388
2 Cities	287	262	18	....	7	.....	5,418	2,148	415	13,594	21,575
3 Towns	233	176	18	2	37	.....	2,111	1,319	339	3,257	7,026
4 Villages	161	135	9	1	16	.....	907	467	194	813	2,381
5 Grand Totals, 1915	6,063	3,169	436	113	2,218	127	20,405	8,794	3,155	28,016	60,370
6 Grand Totals, 1914	6,031	3,126	441	117	2,214	133	20,078	9,185	2,933	28,840	61,036
7 Increases	32	43	.....	....	4	.....	327	.....	222	.....	.....
8 Decreases	.....	.....	5	4	.....	6	.....	391	.....	824	666
9 Percentages	.....	52.27	7.19	1.86	36.58	2.09	33.80	14.56	5.22	46.41	.....

SCHOOLS—Continued

HOUSES, PRAYERS, ETC.—Concluded

	Maps and Globes		Examinations, Prizes		Lectures			Number of Trees planted on Arbor Day	Number of Schools using authorized Scripture Selections	Number of Schools using the Bible	Number of Schools in which passages are memorized	Number of Schools opened and closed with Prayer	No. of Schools where Religious Instruction is given by Clergymen or their representatives
	Number of Maps	Number of Globes	Number of Schools holding Public Examinations	Number of Schools distributing Prizes or Merit Cards	By Inspectors	By other persons	Total						
31	897	79	22	6	3	1	4	6	39	43	24	76	3
32	1,232	166	32	44	1	9	10	222	45	56	23	147	7
33	2,129	210	37	15	.....	8	8	171	79	162	42	192	8
34	732	82	14	.....	.....	.....	.....	56	40	37	19	75	1
35	1,057	105	8	4	.....	.....	.....	22	37	63	22	94	.....
36	963	92	48	7	.....	3	3	47	62	35	31	82	1
37	783	85	26	14	1	3	4	68	19	58	26	77	.....
38	1,646	152	30	25	2	2	4	58	80	85	39	131	6
39	795	457	26	14	.....	8	8	100	36	52	18	73	2
40	1,642	171	56	32	.....	8	8	252	85	125	67	156	6
41	591	70	16	9	.....	1	1	76	61	62	23	70	.....
42	74	11	6	3	.....	3	3	14	.....	15	2	16	.....
43	342	52	4	.....	.....	.....	.....	5	26	36	16	40	.....
44	979	107	17	19	1	.....	1	141	46	82	9	103	6
45	248	39	19	8	1	.....	1	26	7	26	6	48	6
46	1,111	121	33	13	.....	8	8	126	95	113	26	119	12
47	211	39	27	13	.....	12	12	175	.....	43	13	43	4
48	313	49	18	7	.....	.....	....	48	8	28	4	53	7
49	393	55	3	3	.....	.....	.....	44	.....	57	14	61	5
50	242	36	22	14	.....	24	24	28	2	41	1	47	.....
1	56,940	6,076	1,682	814	96	227	323	4,185	2,507	3,614	1,423	5,134	136
2	5,535	550	194	174	21	70	91	*30	65	255	174	267	.....
3	3,126	343	75	35	13	110	123	103	88	205	55	224	.....
4	1,973	240	55	21	22	84	106	181	79	114	38	148	2
5	67,574	7,209	2,006	1,044	152	491	643	*4,499	2,739	4,188	1,690	5,773	138
6	65,549	7,111	1,959	1,043	109	520	629	6,727	2,666	4,179	1,703	5,769	177
7	2,025	98	47	1	43	.....	14	.....	73	9	.....	4	.....
8	.....	.....	.....	.....	.....	29	.....	2,228	.....	.....	13	.....	39
9	†11.14	†1.18	33.08	17.21	23.63	76.36	.....	.....	45.17	69.07	27.87	95.21	2.27

*In addition there were set out 16,414 plants, 849 shrubs and 12,620 bulbs.
†To each school.

THE PUBLIC

V. TABLE E—FINANCIAL

Rural Schools	Receipts				
	Legislative Grants	Municipal Grants	Assessments levied on requisition of the Trustees	Clergy Reserve Fund, balances and other sources	Total receipts for all Public School purposes
	$ c.	$ c.	$ c.	$ c.	$ c.
1 Brant	5,807 91	24,269 84	36,109 96	60,175 18	126,362 89
2 Bruce	13,923 03	53,312 22	61,938 46	80,839 50	210,013 21
3 Carleton	11,323 42	40,821 48	60,421 13	55,553 80	168,119 83
4 Dufferin	6,617 52	27,300 00	32,482 19	28,537 41	94,937 12
5 Dundas	8,304 77	25,356 31	32,210 72	21,029 35	86,901 15
6 Elgin	7,313 20	35,350 62	50,255 30	84,343 03	177,262 15
7 Essex	7,859 48	35,886 62	54,569 41	72,151 17	170,466 68
8 Frontenac	20,472 36	36,816 68	28,221 20	47,351 22	132,861 46
9 Glengarry	6,203 53	23,295 50	19,476 57	16,737 95	65,713 55
10 Grey	14,868 97	70,419 73	77,934 81	80,015 92	243,239 43
11 Haldimand	4,781 46	23,627 80	26,043 28	41,715 52	96,168 06
12 Haliburton	11,907 55	8,181 48	7,362 21	7,488 62	34,939 86
13 Halton	3,952 83	18,331 73	17,679 98	26,867 30	66,831 84
14 Hastings	24,732 83	51,376 68	55,739 34	80,635 86	212,484 71
15 Huron	12,361 04	61,620 05	73,481 97	87,967 27	235,430 33
16 Kent	9,792 13	42,954 57	65,402 84	100,256 33	218,405 67
17 Lambton	11,495 81	53,166 69	70,685 40	57,850 70	193,198 60
18 Lanark	9,436 48	37,126 21	23,123 91	27,120 44	96,807 04
19 Leeds and Grenville	16,172 14	70,380 51	55,160 65	75,567 72	217,281 02
20 Lennox and Addington	9,629 92	34,246 33	25,443 67	30,931 17	100,251 09
21 Lincoln	5,697 88	22,435 26	36,784 41	73,895 67	138,813 22
22 Middlesex	12,680 98	59,957 09	74,777 48	86,237 64	233,653 19
23 Norfolk	7,030 60	31,570 69	39,714 25	59,444 81	137,760 35
24 Northumberland & Durham	15,124 70	64,004 58	70,120 45	72,080 40	221,330 13
25 Ontario	9,129 68	39,068 90	46,627 59	38,990 44	133,816 61
26 Oxford	8,660 06	37,987 64	58,355 98	82,888 58	187,892 26
27 Peel	5,156 75	23,608 19	31,471 56	49,080 01	109,316 51
28 Perth	7,704 80	36,222 94	54,736 23	49,698 56	148,362 53
29 Peterborough	14,291 59	26,138 20	28,876 24	28,602 38	97,908 41
30 Prescott and Russell	7,746 50	31,089 94	23,665 97	39,389 82	101,892 23
31 Prince Edward	4,597 27	23,815 27	22,417 79	24,351 49	75,181 82
32 Renfrew	15,393 36	43,801 95	36,218 86	52,799 18	148,213 35
33 Simcoe	15,388 76	68,543 52	83,847 62	125,962 42	293,742 32
34 Stormont	7,675 86	24,938 38	23,944 76	17,520 31	74,079 31
35 Victoria	13,279 93	31,979 35	36,519 02	34,918 64	116,696 94
36 Waterloo	6,513 21	29,526 32	47,253 33	76,125 73	159,418 59
37 Welland	6,166 87	31,882 33	38,640 40	90,415 31	167,104 91
38 Wellington	11,691 64	45,334 89	55,970 67	83,950 48	196,947 68
39 Wentworth	8,032 21	33,190 34	53,074 26	140,336 42	234,633 23
40 York	17,853 99	68,689 90	143,756 59	376,543 44	606,843 92
41 Algoma	14,821 65	5,595 50	24,905 09	21,656 60	66,978 84
42 Kenora	3,518 82	790 00	6,050 92	2,432 68	12,792 42
43 Manitoulin	9,686 47	.....	18,745 39	8,697 83	37,129 69
44 Muskoka	20,934 34	15,172 23	17,415 58	18,848 54	72,370 69
45 Nipissing	7,530 02	2,256 00	16,156 60	9,167 49	35,110 11
46 Parry Sound	26,699 73	11,863 60	31,387 14	22,672 27	92,622 74
47 Rainy River	8,488 69	8,065 25	13,613 07	5,358 15	35,525 16
48 Sudbury	10,346 46	2,284 42	23,014 54	21,001 89	56,647 31
49 Timiskaming	14,357 94	5,758 66	33,889 58	17,737 25	71,743 43
50 Thunder Bay, etc	12,403 12	4,735 00	27,283 62	11,391 36	55,813 10
Totals	545,560 26	1,604,147 19	2,092,977 99	2,825,331 25	7,068,016 69

SCHOOLS—Continued

STATEMENT

	Expenditure					Balances
	Teachers' Salaries	Sites, and building school houses	Libraries, maps, apparatus, prizes and school books	Rent and repairs, fuel and other expenses	Total expenditure for all Public School purposes	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	53,451 90	19,617 15	1,365 85	17,443 40	91,878 30	34,484 59
2	100,937 07	12,022 23	2,480 47	30,430 17	145,869 94	64,143 27
3	81,936 29	20,546 12	1,087 79	34,613 81	138,184 01	29,935 82
4	52,590 54	3,379 78	534 41	13,745 99	70,250 72	24,686 40
5	51,195 30	5,138 70	1,295 64	13,283 64	70,913 28	15,987 87
6	70,557 75	19,642 61	1,804 16	24,532 07	116,536 59	60,725 56
7	71,421 24	33,406 36	995 57	23,538 96	129,362 13	41,104 55
8	63,385 28	13,492 73	999 39	16,458 48	94,335 88	38,525 58
9	40,444 87	6,574 67	793 23	6,181 63	53,994 40	11,719 15
10	129,502 12	15,304 80	2,238 05	35,541 35	182,586 32	60,653 11
11	43,829 36	2,887 57	618 43	10,023 09	57,358 45	38,809 61
12	21,901 34	1,093 10	246 61	4,234 47	27,475 52	7,464 34
13	36,232 42	1,877 78	885 93	9,225 23	48,221 36	18,610 48
14	103,677 54	7,998 51	1,732 16	27,223 06	140,631 27	71,853 44
15	116,949 75	13,517 41	1,509 75	43,099 02	175,075 93	60,354 40
16	85,930 38	26,707 77	1,652 35	24,514 88	138,805 38	79,600 29
17	106,050 77	8,705 66	2,477 60	24,933 65	142,167 68	51,030 92
18	57,994 25	2,834 21	756 08	10,537 67	72,122 21	24,684 83
19	114,704 35	11,892 46	900 07	25,895 51	153,392 39	63,888 63
20	54,471 75	3,136 74	607 12	13,239 53	71,455 14	28,795 95
21	44,945 82	26,843 31	1,057 75	23,656 97	96,503 85	42,309 37
22	115,268 62	14,756 98	1,969 37	31,564 18	163,559 15	70,094 04
23	59,305 09	7,199 59	1,044 53	16,781 46	84,330 67	53,429 68
24	119,535 67	18,332 51	2,228 12	24,988 88	165,085 18	56,244 95
25	75,464 86	6,680 62	1,236 90	20,622 21	104,004 59	29,812 02
26	79,897 96	12,252 19	1,666 07	29,534 17	123,350 39	64,541 87
27	49,394 62	10,766 92	367 93	15,468 70	75,998 17	33,318 34
28	72,369 65	8,661 84	2,210 67	19,866 02	103,108 18	45,254 35
29	56,102 82	3,132 01	976 79	11,034 63	71,246 25	26,662 16
30	50,009 75	13,241 03	773 35	13,522 07	77,546 20	24,546 03
31	41,763 30	7,081 49	1,076 39	7,886 70	57,807 88	17,373 94
32	76,162 15	9,135 82	1,386 00	16,932 68	103,616 65	44,596 70
33	132,848 27	30,053 77	3,810 00	31,905 85	198,617 89	95,124 43
34	44,641 03	2,936 26	853 21	10,128 42	58,558 92	15,520 39
35	64,269 49	11,119 23	1,076 58	17,485 47	93,950 77	22,746 17
36	62,565 22	14,321 48	1,348 02	18,366 87	96,601 59	62,817 00
37	56,932 26	39,613 88	1,189 66	12,776 10	110,511 90	56,593 01
38	91,197 09	12,349 07	1,789 28	29,096 25	134,431 69	62,515 99
39	66,032 84	68,269 82	2,550 50	22,819 90	159,673 06	74,960 17
40	159,482 74	199,108 51	3,989 53	89,031 75	451,612 53	155,231 39
41	35,729 69	8,994 37	562 71	8,401 72	53,688 49	13,290 35
42	6,772 96	1,473 65	127 80	2,853 79	11,228 20	1,564 22
43	21,292 41	1,438 39	248 21	5,417 48	28,396 49	8,733 20
44	44,190 25	2,644 44	914 07	10,719 36	58,468 12	13,902 57
45	20,521 51	2,317 48	433 69	4,808 12	28,080 80	7,029 31
46	57,643 66	5,820 38	1,389 34	13,130 48	77,983 86	14,638 88
47	22,683 20	4,157 23	476 36	5,133 24	32,450 03	3,075 13
48	28,620 16	7,149 94	524 80	8,405 40	44,700 30	11,947 01
49	37,170 43	12,613 96	1,551 56	14,211 52	65,547 47	6,195 96
50	30,246 32	8,125 31	1,548 50	11,044 95	50,965 08	4,848 02
	3,280,224 11	800,367 84	65,358 35	956,290 95	5,102,241 25	1,965,775 44

THE PUBLIC

V. TABLE E—FINANCIAL

Cities	Receipts			
	Legislative Grants	Municipal Grants and Assessments	Clergy Reserve Fund, balances and other sources	Total receipts for all Public School purposes
	$ c.	$ c.	$ c.	$ c.
1 Belleville	1,299 44	32,669 86	6,130 81	40,100 11
2 Kitchener (Berlin)	2,127 40	64,915 58	1,885 34	68,928 32
3 Brantford	3,326 54	97,795 44	3,605 57	104,727 55
4 Chatham	1,551 95	36,492 00	2,495 90	40,539 85
5 Fort William	4,785 44	103,662 97	929 12	109,377 53
6 Galt	1,327 47	36,102 16	651 39	38,081 02
7 Guelph	3,300 85	46,852 18	609 00	50,762 03
8 Hamilton	15,952 70	577,631 45	75,981 69	669,565 84
9 Kingston	3,727 44	59,000 00	17,834 62	80,562 06
10 London	11,213 82	449,882 23	11,905 87	473,001 92
11 Niagara Falls	1,117 76	49,400 00	317 67	50,835 43
12 Ottawa	11,107 36	368,322 19	39,262 89	418,692 44
13 Peterborough	4,836 80	79,900 00	3,492 42	88,229 22
14 Port Arthur	3,017 26	60,500 00	3,884 58	67,401 84
15 St. Catharines	1,870 32	65,256 12	15,787 26	82,913 70
16 St. Thomas	2,669 90	56,650 65	8,332 62	67,653 17
17 Sarnia	949 20	30,386 54	2,005 11	33,340 85
18 Sault Ste. Marie	2,060 86	45,239 00	3,537 14	50,837 00
19 Stratford	4,298 96	59,620 00	2,651 79	66,570 75
20 Toronto	93,812 96	3,169,805 99	223,021 14	3,486,640 09
21 Windsor	2,976 27	78,711 77	31,141 25	112,829 29
22 Woodstock	1,273 90	24,500 00	2,778 96	28,552 86
Totals	178,604 60	5,593,296 13	458,242 14	6,230,142 87
Towns				
1 Alexandria	30 64	1,308 57	280 17	1,619 38
2 Alliston	168 10	4,400 00	868 49	5,436 59
3 Almonte	189 20	5,203 52	789 74	6,182 46
4 Amherstburg	139 20	4,182 10	355 94	4,677 24
5 Arnprior	279 58	9,056 69	2,859 46	12,195 73
6 Aurora	248 84	6,400 00	124 11	6,772 95
7 Aylmer	302 12	6,806 88	1,042 28	8,151 28
8 Bala	425 37	590 00	262 42	1,277 79
9 Barrie	759 26	21,078 64	2,140 87	23,978 77
10 Blenheim	274 02	4,589 15	2,178 99	7,042 16
11 Blind River	298 31	2,764 28	800 42	3,863 01
12 Bothwell	64 46	960 50	170 95	1,195 91
13 Bowmanville	339 30	7,365 00	158 49	7,862 79
14 Bracebridge	705 11	7,682 50	172 24	8,559 85
15 Brampton	387 86	10,544 67	581 96	11,514 49
16 Brockville	1,370 28	26,000 00	316 20	27,686 48
17 Bruce Mines	328 35	1,975 00	23 50	2,326 85
18 Burlington	249 84	6,451 04	53 72	6,754 60
19 Cache Bay	311 35	1,902 30	406 96	2,620 61
20 Campbellford	404 58	9,173 67	440 85	10,019 10
21 Carleton Place	738 86	8,493 22	369 79	9,601 87
22 Charlton	351 67	1,500 00	263 59	2,115 26
23 Chesley	234 30	5,000 00	1,304 67	6,538 97
24 Clinton	1,283 22	5,000 00	424 69	6,707 91
25 Cobalt	905 36	24,218 87	1,305 33	26,429 56
26 Cobourg	488 94	9,585 00	559 73	10,633 67
27 Cochrane	401 79	4,808 56	174 15	5,384 50
28 Collingwood	776 90	27,084 00	136 06	27,996 96
29 Copper Cliff	745 86	14,751 90	7,550 31	23,048 07
30 Cornwall	1,393 00	10,864 45	1,032 52	13,289 97
31 Deseronto	245 84	5,579 62	28 49	5,853 95
32 Dresden	239 02	4,750 00	69 41	5,058 43

SCHOOLS—Continued

STATEMENT—Continued

	Expenditure					
	Teachers' Salaries	Sites, and building school houses	Libraries, maps, apparatus and other equipment, prizes and school books,	Rent and repairs, fuel and other expenses	Total expenditure for all Public School purposes	Balances
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	23,462 46	772 25	162 24	13,304 36	37,701 31	2,398 80
2	38,199 50	17,343 95	2,046 51	9,915 54	67,505 50	1,422 82
3	55,389 25	24,329 28	3,061 30	21,835 74	104,615 57	111 98
4	27,387 07	766 71	241 97	12,144 10	40,539 85	.....
5	57,582 87	29,705 76	3,704 76	17,886 88	108,880 27	497 26
6	27,817 44	.....	500 00	8,463 27	36,780 71	1,300 31
7	35,077 00	412 20	250 00	15,022 83	50,762 03	.....
8	237,101 67	294,825 32	11,280 67	68,734 09	611,941 75	57,624 09
9	47,098 70	14,309 85	538 68	18,614 83	80,562 06	.....
10	158,033 52	224,318 87	963 21	89,454 77	472,770 37	231 55
11	21,924 70	15,483 80	648 79	8,699 05	46,756 34	4,079 09
12	252,206 92	34,042 69	.....	109,102 47	395,352 08	23,340 36
13	52,253 78	2,173 85	3,998 59	29,026 33	87,452 55	776 67
14	42,535 12	209 08	1,322 38	22,334 57	66,401 15	1,000 69
15	31,408 83	31,215 12	322 50	13,091 78	76,038 23	6,875 47
16	41,930 55	4,931 65	2,026 14	18,764 83	67,653 17	.....
17	23,311 86	1,429 85	300 19	5,258 13	30,300 03	3,040 82
18	30,055 29	5,314 46	2,710 65	12,287 03	50,367 43	469 57
19	33,612 62	14,859 15	3,336 12	13,833 97	65,641 86	928 89
20	1,359,135 81	1,319,012 12	35,823 46	768,074 39	3,482,045 78	4,594 31
21	66,981 66	19,537 34	5,195 27	7,725 92	99,440 19	13,389 10
22	20,745 79	.....	1,379 38	5,547 65	27,672 82	880 04
	2,683,252 41	2,054,993 30	79,812 81	1,289,122 53	6,107,181 05	122,961 82
1	1,160 00	6 15	25 38	409 58	1,601 11	18 27
2	3,500 00	.....	.....	1,422 15	4,922 15	514 44
3	4,198 96	.....	20 84	1,632 01	5,851 81	330 65
4	3,438 75	4 10	42 00	964 94	4,449 79	227 45
5	7,038 00	429 70	92 52	2,405 40	9,965 62	2,230 11
6	4,400 32	1,534 67	32 00	783 54	6,750 53	22 42
7	5,605 00	.....	.....	1,127 13	6,732 13	1,419 15
8	700 00	216 14	.....	248 06	1,164 20	113 59
9	16,894 00	742 64	193 32	4,236 13	22,066 09	1,912 68
10	3,480 22	2,242 94	50 00	1,091 72	6,864 88	177 28
11	2,467 68	.....	.....	1,379 63	3,847 31	15 70
12	1,025 00	.....	9 69	161 22	1,195 91	.....
13	5,755 00	455 20	.....	1,652 59	7,862 79	.....
14	6,250 00	36 35	.....	2,251 16	8,537 51	22 34
15	7,311 80	.....	651 05	2,945 29	10,908 14	606 35
16	19,440 00	1,962 18	219 43	5,981 81	27,603 42	83 06
17	1,730 00	.....	184 13	378 91	2,293 04	33 81
18	4,777 50	235 74	97 33	1,517 08	6,627 65	126 95
19	1,780 00	.....	.....	725 95	2,505 95	114 66
20	7,950 49	.....	179 37	1,590 08	9,719 94	299 16
21	7,408 75	185 55	.....	1,867 04	9,461 34	140 53
22	1,388 27	.....	25 85	589 46	2,003 58	111 68
23	4,011 80	329 87	69 73	1,982 57	6,393 97	145 00
24	5,682 22	.....	54 59	971 10	6,707 91	.....
25	14,183 90	6,185 18	547 16	5,401 35	26,317 59	111 97
26	7,923 50	133 55	60 95	1,817 64	9,935 64	698 03
27	3,562 00	11 00	171 94	1,438 83	5,183 77	200 73
28	17,764 21	192 38	47 42	8,911 45	26,915 46	1,081 50
29	7,290 15	879 67	16 00	3,354 88	11,540 70	11,507 37
30	9,660 63	.....	.....	2,040 55	11,701 18	1,588 79
31	5,043 50	.....	.....	777 05	5,820 55	33 40
32	4,137 50	144 00	1 80	710 39	4,993 69	64 74

THE PUBLIC
V. TABLE E—FINANCIAL

Towns—Continued	Receipts			
	Legislative Grants	Municipal Grants and Assessments	Clergy Reserve Fund, balances and other sources	Total receipts for all Public School purposes
	$ c.	$ c.	$ c.	$ c.
33 Dryden	377 60	3,813 84	273 54	4,464 98
34 Dundas	483 14	10,900 00	288 88	11,672 02
35 Dunnville	336 94	6,945 58	549 88	7,832 40
36 Durham	170 56	3,950 00	843 61	4,964 17
37 Eastview	133 92	5,311 00	402 56	5,847 48
38 Englehart	278 85	2,975 50	162 09	3,416 44
39 Essex	151 56	5,561 25	355 55	6,068 36
40 Ford	56 25	2,068 00	339 04	2,463 29
41 Forest	188 66	5,000 00	338 19	5,526 85
42 Fort Frances	503 31	6,076 70	2,217 12	8,797 13
43 Frood Mine	263 72	.....	676 39	940 11
44 Gananoque	391 58	9,246 80	1,685 28	11,323 66
45 Goderich	568 46	10,397 41	50	10,966 37
46 Gore Bay	379 85	2,560 05	341 62	3,281 52
47 Gravenhurst	489 16	6,087 52	130 13	6,706 81
48 Haileybury	637 14	10,383 00	143 04	11,163 18
49 Hanover	1,327 76	6,600 00	1,219 89	9,147 65
50 Harriston	165 38	3,732 52	7 45	3,905 35
51 Hawkesbury	77 28	2,169 85	4,351 87	6,599 00
52 Hespeler	516 96	8,996 00	1,132 83	10,645 79
53 Huntsville	564 96	5,052 24	626 69	6,243 89
54 Ingersoll	1,083 35	13,038 63	1,207 36	15,329 34
55 Iroquois Falls	.....	1,403 44	24 18	1,427 62
56 Kearney	242 66	2,339 44	471 31	3,053 41
57 Keewatin	481 54	6,169 28	1,216 24	7,867 06
58 Kenora	1,052 76	18,450 18	357 27	19,860 21
59 Kincardine	237 66	5,213 88	1,214 61	6,666 15
60 Kingsville	446 30	6,799 79	377 25	7,623 34
61 Latchford	310 51	3,215 26	335 35	3,861 12
62 Leamington	262 76	9,075 00	2 72	9,340 48
63 Lindsay	687 98	19,871 11	3,775 66	24,334 75
64 Listowel	304 12	5,719 00	136 24	6,159 36
65 Little Current	436 66	3,207 90	32 57	3,677 13
66 Massey	703 40	2,675 00	106 41	3,484 81
67 Matheson	270 04	2,350 00	847 69	3,467 73
68 Mattawa	521 71	1,000 00	1,411 71	2,933 42
69 Meaford	362 04	8,966 00	826 05	10,154 09
70 Midland	762 03	48,023 00	519 73	49,304 76
71 Milton	221 02	4,895 70	26 83	5,143 55
72 Mitchell	214 48	35,067 00	213 47	35,494 95
73 Mount Forest	176 20	4,318 00	235 38	4,729 58
74 Napanee	364 68	8,760 00	237 87	9,362 55
75 New Liskeard	580 64	8,606 24	142 09	9,328 97
76 Newmarket	380 40	8,000 00	2,139 54	10,519 94
77 Niagara	175 56	2,986 32	380 55	3,542 43
78 North Bay	2,172 61	37,124 72	8,166 25	47,463 58
79 Oakville	313 76	10,104 95	765 19	11,183 90
80 Orangeville	286 76	7,825 48	637 32	8,749 56
81 Orillia	1,789 00	32,638 94	13,022 49	47,450 43
82 Oshawa	871 00	24,649 28	1 26	25,521 54
83 Owen Sound	1,694 06	40,035 00	190 61	41,919 67
84 Palmerston	195 59	4,016 22	120 64	4,332 45
85 Paris	1,044 83	9,150 00	893 08	11,087 91
86 Parkhill	135 20	2,900 00	194 45	3,229 65
87 Parry Sound	866 21	11,759 90	1,228 33	13,854 44
88 Pembroke	548 32	17,702 64	8 50	18,259 46
89*Penetanguishene	432 95	11,303 25	1,402 45	13,138 65

* Including Protestant Separate School.

SCHOOLS—Continued
STATEMENT—Continued

	Expenditure					
	Teachers' Salaries	Sites, and building school houses	Libraries, maps apparatus and other equipment, prizes and school books	Rent and repairs, fuel, and other expenses	Total expenditure for all Public School purposes	Balances
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
33	3,150 00	168 76	49 04	732 75	4,100 55	364 43
34	8,905 77	.....	.....	2,496 26	11,402 03	269 99
35	5,745 00	550 09	.....	1,023 99	7,319 08	513 32
36	3,376 25	.....	56 61	1,449 64	4,882 50	81 67
37	4,034 42	661 60	196 84	832 38	5,725 24	122 24
38	1,849 22	667 76	74 53	708 13	3,299 64	116 80
39	4,117 13	.....	315 98	1,270 62	5,703 73	364 63
40	1,218 54	155 70	.....	583 63	1,957 87	505 42
41	3,757 50	445 75	60 00	1,022 99	5,286 24	240 61
42	4,840 50	921 82	200 00	2,664 06	8,626 38	170 75
43	700 00	.....	.....	233 98	933 98	6 13
44	7,878 55	556 07	.....	2,233 19	10,667 81	655 85
45	8,413 10	.....	31 00	2,522 27	10,966 37	.....
46	2,522 50	.....	.....	576 09	3,098 59	182 93
47	4,682 68	.....	.....	1,801 69	6,484 37	222 44
48	8,369 28	29 05	24 22	2,686 94	11,109 49	53 69
49	5,811 10	138 99	88 21	1,796 50	7,834 80	1,312 85
50	3,042 50	.....	41 09	821 76	3,905 35	.....
51	2,333 44	158 05	.....	405 01	2,896 50	3,702 50
52	7,670 00	113 02	.....	2,227 77	10,010 79	635 00
53	4,577 75	490 52	41 98	987 23	6,007 48	236 41
54	9,601 15	245 70	.....	5,282 73	15,129 58	199 76
55	388 06	777 19	199 69	52 59	1,417 53	10 09
56	1,152 00	1,493 00	54 42	328 81	3,028 23	25 18
57	4,520 00	105 00	110 92	1,477 36	6,213 28	1,653 78
58	14,712 80	528 18	.....	4,052 14	19,293 12	567 09
59	4,490 00	845 30	.....	1,206 05	6,541 35	124 80
60	5,325 00	1,139 70	.....	1,024 85	7,489 55	133 79
61	1,986 68	308 42	73 99	1,418 03	3,787 12	74 00
62	7,436 37	102 75	.....	1,798 90	9,338 02	2 46
63	15,367 00	3,456 63	.....	5,050 83	23,874 46	460 29
64	4,817 43	59 15	82 32	1,123 21	6,082 11	77 25
65	2,355 00	726 08	59 16	345 16	3,485 40	191 73
66	2,780 00	.....	.....	645 07	3,425 07	59 74
67	1,590 00	155 06	.....	1,621 60	3,366 66	101 07
68	1,098 97	.....	14 84	372 19	1,486 00	1,447 42
69	6,852 14	.....	.....	2,370 97	9,223 11	930 98
70	16,778 14	25,030 06	987 38	5,647 84	48,443 42	861 34
71	3,895 00	383 74	12 24	661 91	4,952 89	190 66
72	4,389 00	30,196 03	25 15	834 47	35,444 65	50 30
73	3,355 00	.....	.....	1,341 68	4,696 68	32 90
74	7,285 40	237 63	47 67	1,548 26	9,118 96	243 59
75	6,423 86	1,196 75	83 15	1,595 21	9,298 97	30 00
76	6,914 25	235 81	173 00	2,476 30	9,799 36	720 58
77	2,458 96	.....	83 96	745 56	3,288 48	253 95
78	21,459 21	8,862 53	1,298 26	14,691 04	46,311 04	1,152 54
79	6,785 00	107 37	68 41	1,648 65	8,609 43	2,574 47
80	6,613 32	.....	403 83	1,537 91	8,555 06	194 50
81	19,771 00	1,993 55	180 72	4,546 29	26,491 56	20,958 87
82	19,026 50	19 31	1,388 17	4,914 33	25,348 31	173 23
83	30,692 65	1,207 83	141 28	7,398 67	39,440 43	2,479 24
84	3,027 80	136 66	.....	956 43	4,120 89	211 56
85	7,659 00	.....	.....	3,010 05	10,669 05	418 86
86	2,350 75	.....	.....	605 22	2,955 97	273 68
87	10,261 03	608 37	.....	2,897 18	13,766 58	87 86
88	12,074 50	500 98	240 99	2,892 03	15,708 50	2,550 96
89	8,315 25	436 72	102 50	3,815 18	12,669 65	469 00

THE PUBLIC
V. TABLE E—FINANCIAL

Towns—Concluded	Receipts: Legislative Grants	Municipal Grants and Assessments	Clergy Reserve Fund, balances and other sources	Total receipts for all Public School purposes
	$ c.		$ c.	$ c.
90 Perth	242 48	7,332 45	234 99	7,809 92
91 Petrolea	476 96	12,000 00	540 85	13,017 81
92 Picton	382 94	9,910 70	277 32	10,570 96
93 Port Hope	519 15	10,815 92	114 80	11,449 87
94 Powassan	340 47	2,020 00	921 09	3,281 56
95 Prescott	255 84	6,107 33	64 19	6,427 36
96 Preston	512 96	13,000 00	607 68	14,120 64
97 Rainy River	893 87	6,750 00	264 38	7,908 25
98 Renfrew	1,496 40	8,693 06	699 10	10,888 56
99 Ridgetown	239 02	4,750 00	69 41	5,058 43
100 Rockland	30 64	2,008 66	64 55	2,103 85
101 St. Mary's	406 94	11,568 55	1,439 11	13,414 60
102 Sandwich	173 38	8,967 58	2,983 44	12,124 40
103 Seaforth	281 92	5,469 53	622 07	6,373 52
104 Simcoe	456 31	8,826 95	1,625 00	10,908 26
105 Sioux Lookout	309 25	10,576 63	2,804 26	13,690 14
106 Smith's Falls	1,044 98	19,858 00	437 66	21,340 64
107 Southampton	190 02	4,747 83	2,569 68	7,507 53
108 Stayner	125 56	2,225 00	4,180 02	6,530 58
109 Steelton	862 81	19,753 19	9 02	20,625 02
110 Strathroy	359 92	7,010 00	260 60	7,630 52
111 Sturgeon Falls	397 06	4,420 84	1,469 74	6,287 64
112 Sudbury	788 91	13,237 00	5,116 96	19,142 87
113 Thessalon	481 35	4,206 62	435 59	5,123 56
114 Thornbury	92 92	10,325 50	111 68	10,530 10
115 Thorold	299 38	15,621 28	195 14	16,115 80
116 Tilbury	79 10	2,232 11	934 96	3,246 17
117 Tillsonburg	388 27	8,000 00	96 49	8,484 76
118 Timmins	208 41	1,750 00	1,999 57	3,957 98
119 Trenton	397 22	11,192 00	1,984 02	13,573 24
120 Trout Creek	285 04	1,050 00	364 00	1,699 04
121 Uxbridge	166 65	4,400 00	256 06	4,822 71
122 Vankleek Hill	85 92	4,113 94	1,387 76	5,587 62
123 Walkerton	241 12	4,862 06	304 13	5,407 31
124 Walkerville	893 88	96,948 78	2,386 45	100,229 11
125 Wallaceburg	666 45	11,465 07	18,090 40	30,221 92
126 Waterloo	477 96	21,705 33	504 66	22,687 95
127 Webbwood	334 41	2,056 29	35 53	2,426 23
128 Welland	903 90	25,000 00	24,405 32	50,309 22
129 Weston	292 22	5,711 95	2,323 37	8,327 54
130 Whitby	279 40	6,250 00	214 55	6,743 95
131 Wiarton	213 20	6,613 62	260 35	7,087 17
132 Wingham	299 66	5,104 42	771 26	6,175 34
Totals	61,646 61	1,265,916 13	170,638 51	1,498,201 25
Totals				
1 Rural Schools	545,560 26	3,697,125 18	2,825,331 25	7,068,016 69
2 Cities	178,604 60	5,593,296 13	458,242 14	6,230,142 87
3 Towns	61,646 61	1,265,916 13	170,638 51	1,498,201 25
4 Villages	21,928 75	373,783 15	209,530 00	605,241 90
5 Grand Totals, 1915	807,740 22	10,930,120 59	3,663,741 90	15,401,602 71
6 Grand Totals, 1914	716,377 26	11,704,877 53	3,550,747 87	15,972,002 66
7 Increases	91,362 96	.....	112,994 03	.....
8 Decrease	.....	774,756 94	.....	570,399 95
9 Percentages	5.24	70.96	23.78	.....

Cost per pupil, enrolled attendance: Rural Schools, $23.81; Cities, $46.17;

SCHOOLS—Concluded
STATEMENT—Concluded

	Expenditure					
	Teachers' Salaries	Sites, and building school houses	Libraries, maps, apparatus and other equipment, prizes and school books	Rent and repairs, fuel and other expenses	Total expenditure for all Public School purposes	Balances
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
90	5,594 00	.....	.....	2,133 17	7,727 17	82 75
91	9,055 50	411 00	214 59	3,086 17	12,767 26	250 55
92	7,165 26	68 43	.....	2,210 18	9,443 87	1,127 09
93	8,713 00	306 00	60 79	2,282 76	11,362 55	87 32
94	2,180 45	.....	.....	538 53	2,718 98	562 58
95	4,953 18	47 60	60 00	1,265 17	6,325 95	101 41
96	10,610 00	280 69	.....	2,623 03	13,513 72	606 92
97	5,780 00	.....	.....	2,119 17	7,899 17	9 08
98	7,545 00	161 48	2 00	3,180 08	10,888 56	.....
99	4,137 50	144 00	1 80	710 39	4,993 69	64 74
100	1,220 09	.....	.....	291 44	1,511 53	592 32
101	6,717 20	3,990 22	.....	2,707 18	13,414 60	.....
102	3,520 80	296 32	.....	1,573 42	5,390 54	6,733 86
103	4,126 10	257 50	209 51	1,033 14	5,626 25	747 27
104	7,970 50	4 93	.....	2,932 83	10,908 26	.....
105	1,240 00	8,740 37	.....	2,355 14	12,335 51	1,354 63
106	16,599 00	.....	16 80	4,503 38	21,119 18	221 46
107	3,892 50	2,680 43	24 88	716 12	7,313 93	193 60
108	2,280 00	.....	55 26	505 20	2,840 46	3,690 12
109	11,902 50	2,898 27	.....	5,703 29	20,504 06	120 96
110	5,886 28	470 90	.....	1,272 52	7,629 70	82
111	3,510 00	.....	73 83	1,530 46	5,114 29	1,173 35
112	9,849 50	1,172 14	84 31	3,224 13	14,330 08	4,812 79
113	4,169 25	.....	.....	691 65	4,860 90	262 66
114	1,800 35	7,786 00	71 06	538 55	10,195 96	334 14
115	4,893 37	8,909 32	61 65	2,012 96	15,877 30	238 50
116	1,575 00	68 79	79 82	387 49	2,111 10	1,135 07
117	6,802 00	161 77	2 50	1,451 51	8,417 78	66 98
118	1,600 00	1,226 51	.....	1,131 47	3,957 98	.....
119	8,181 81	.....	57 57	3,242 23	11,481 61	2,091 63
120	1,240 00	.....	28 73	374 20	1,642 93	56 11
121	3,914 00	21 00	.....	805 16	4,740 16	82 55
122	2,576 15	.....	22 55	368 20	2,966 90	2,620 72
123	4,035 50	.....	103 97	1,029 84	5,169 31	238 00
124	14,202 65	77,608 36	244 74	6,616 86	98,672 61	1,556 50
125	8,107 75	19,687 94	93 04	1,324 97	29,213 70	1,008 22
126	11,755 38	6,173 47	879 17	3,430 65	22,238 67	449 28
127	1,808 45	.....	47 27	552 19	2,407 91	18 32
128	16,290 75	11,840 07	98 00	6,701 46	34,930 28	15,378 94
129	6,461 25	.....	.....	1,368 87	7,830 12	497 42
130	5,356 75	.....	11 00	1,116 85	6,484 60	259 35
131	5,426 25	150 00	226 88	1,284 04	7,087 17	.....
132	4,545 00	188 10	4 30	1,174 97	5,912 37	262 97
	837,152 62	257,741 30	12,640 07	267,879 29	1,375,413 28	122,787 97
1	3,280,224 11	800,367 84	65,358 35	956,290 95	5,102,241 25	1,965,775 44
2	2,683,252 41	2,054,993 30	79,812 81	1,289,122 53	6,107,181 05	122,961 82
3	837,152 62	257,741 30	12,640 07	267,879 29	1,375,413 28	122,787 97
4	309,535 29	82,224 01	4,805 43	102,228 63	498,793 36	106,448 54
5	7,110,164 43	3,195,326 45	162,616 66	2,615,521 40	13,083,628 94	2,317,973 77
6	6,693,277 10	4,180,333 53	144,885 46	2,507,255 70	13,525,751 79	2,446,250 87
7	416,887 33	.....	17,731 20	108,265 70	.....	.....
8	.....	985,007 08	.....	.....	442,122 85	128,277 10
9	54.34	24.42	1.24	19.99	.....	.....

Towns, $21.18; Villages, $19.08; Province, $29.89.

ROMAN CATHOLIC

I. TABLE F—FINANCIAL

Rural Schools	Number of Schools	Receipts			
		Legislative Grants	Municipal Grants and Assessments	Balances, subscribed and other sources	Total amount received
		$ c.	$ c.	$ c.	$ c.
1 Bruce	9	711,44	7,981 82	5,615 52	14,308 78
2 Carleton	16	846 67	9,884 16	6,197 91	16,928 74
3 Essex	28	1,014 09	22,200 02	10,455 86	33,669 97
4 Frontenac	11	1,599 86	4,846 57	1,942 73	8,389 16
5 Grey	7	409 59	4,258 20	2,138 77	6,806 56
6 Hastings	6	781 90	2,761 25	1,580 80	5,123 95
7 Huron	9	880 51	5,737 42	3,215 94	9,833 87
8 Kent	7	303 51	5,473 72	2,082 19	7,859 42
9 Lambton	1	76 37	508 25	682 08	1,266 70
10 Lanark	3	310 89	1,341 32	357 51	2,009 72
11 Leeds and Grenville	2	255 91	425 27	146 63	827 81
12 Lennox and Addington	2	303 99	687 57	350 97	1,342 53
13 Middlesex	5	285 84	3,078 01	1,334 10	4,697 95
14 Norfolk	1	86 37	851 94	372 21	1,310 52
15 Northumberland & Durham	6	889 44	2,280 93	469 23	3,639 60
16 Ontario	1	76 37	319 62	977 97	1,373 96
17 Peel	1	73 87	599 88	162 72	836 47
18 Perth	7	555 06	5,186 72	3,583 72	9,325 50
19 Peterborough	2	135 24	1,543 18	439 53	2,117 95
20 Prescott and Russell	92	112 50	60,069 61	32,910 35	93,092 46
21 Renfrew	15	2,855 13	8,235 66	8,192 22	19,283 01
22 Simcoe	4	325 72	5,542 40	1,658 97	7,527 09
23 Stormont, Dundas & Glengarry	18	1,152 17	10,722 22	4,403 28	16,277 67
24 Victoria	2	142 74	1,337 41	236 51	1,716 66
25 Waterloo	7	417 02	5,802 16	5,585 76	11,804 94
26 Wellington	6	334 22	3,583 40	1,544 17	5,461 79
27 Districts	47	4,846 20	23,505 47	12,495 86	40,847 53
Totals	315	19,782 62	198,764 18	109,133 51	327,680 31
Cities					
1 Belleville	1	172 00	4,211 46	624 44	5,007 90
2 Kitchener (Berlin)	2	437 00	12,509 47	13,189 00	26,135 47
3 Brantford	2	227 00	4,942 76	1,266 11	6,435 87
4 Chatham	1	220 00	6,951 78	6,271 24	13,443 02
5 Fort William	4	1,260 17	20,394 07	749 66	22,403 90
6 Galt	1	60 00	1,417 96	583 14	2,061 10
7 Guelph	3	274 00	12,890 56	782 39	13,946 95
8 Hamilton	11	2,160 67	30,660 23	11,673 94	44,494 84
9 Kingston	3	469 00	11,378 37	499 40	12,346 77
10 London	9	665 00	21,300 57	1,278 98	23,244 55
11 Niagara Falls	1	115 00	2,696 70	630 32	3,442 02
12 Ottawa	33	.....	85,636 50	19,994 70	105,631 20
13 Peterborough	4	561 00	12,224 99	1,305 53	14,091 52
14 Port Arthur	2	670 17	10,489 11	13 46	11,172 74
15 St. Catharines	3	254 00	6,767 80	305 80	7,327 60
16 St. Thomas	1	144 00	5,618 56	777 62	6,540 18
17 Sarnia	2	175 00	3,933 81	3,219 84	7,328 65
18 Sault Ste. Marie	3	519 17	13,293 62	3,547 91	17,360 70
19 Stratford	1	251 80	5,877 47	1,319 85	7,449 12
20 Toronto	33	4,822 00	161,788 00	62,540 51	229,150 51
21 Windsor	5	685 00	25,533 23	5,547 91	31,766 14
22 Woodstock	1	84 00	1,572 13	394 69	2,050 82
Totals	126	14,225 98	462,089 15	136,516 44	612,831 57

SEPARATE SCHOOLS

STATEMENT, ETC.

	Expenditure					
	Teachers' Salaries	Sites and building school houses	Libraries, maps, apparatus, prizes and school books	All other purposes	Total amount expended	Balances
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	7,410 52	704 97	75 11	2,355 19	10,545 79	3,762 99
2	7,778 85	1,654 75	127 42	3,758 87	13,319 89	3,608 85
3	17,618 03	7,003 86	657 52	4,503 80	29,783 21	3,886 76
4	5,417 29	480 29	57 86	1,582 23	7,537 67	851 49
5	3,622 61	384 92	14 21	904 81	4,926 55	1,880 01
6	3,026 00	255 32	54 77	989 08	4,325 17	798 78
7	5,147 35	2,055 89	112 13	1,036 60	8,351 97	1,481 90
8	4,671 28	118 48	63 83	996 78	5,850 37	2,009 05
9	605 60	15 65	16 85	105 25	743 35	523 35
10	1,256 00	383 65	9 75	114 68	1,764 08	245 64
11	600 50	5 00	.....	62 39	667 89	159 92
12	924 80	13 01	16 50	195 84	1,150 15	192 38
13	2,790 00	421 87	60 41	460 84	3,733 12	964 83
14	600 75	95 39	32 17	206 34	934 65	375 87
15	2,925 00	62 94	5 85	384 15	3,377 94	261 66
16	600 00	246 25	19 14	133 80	999 19	374 77
17	500 00	113 75	11 00	31 15	655 90	180 57
18	5,894 71	747 37	196 49	1,550 89	8,389 46	936 04
19	1,150 00	60 63	84 00	380 16	1,674 79	443 16
20	46,618 84	10,506 46	975 00	9,197 29	67,297 59	25,794 87
21	8,215 64	4,099 90	157 33	3,216 07	15,688 94	3,594 07
22	3,381 55	1,375 23	33 29	1,604 48	6,397 55	1,129 54
23	10,548 82	1,229 29	196 88	1,570 27	13,545 26	2,732 41
24	1,250 00	44 70	117 75	118 35	1,530 80	185 86
25	5,297 00	849 64	77 85	1,333 39	7,557 88	4,247 06
26	3,432 15	146 00	40 45	519 57	4,138 17	1,523 62
27	21,300 01	4,244 73	194 30	10,967 77	36,706 81	4,140 72
	172,583 30	37,319 94	3,410 86	48,280 04	261,594 14	66,086 17
1	1,435 00	1,300 00	.....	1,500 11	4,235 11	772 79
2	6,540 00	14,196 87	168 92	5,229 68	26,135 47	.....
3	2,827 00	2,392 13	63 20	856 73	6,139 06	296 81
4	3,462 64	770 38	32 28	1,222 06	5,487 36	7,955 66
5	14,286 99	5,691 05	.....	2,425 86	22,403 90	.....
6	1,100 00	696 69	13 97	202 58	2,013 24	47 86
7	4,500 00	3,856 61	175 64	2,301 84	10,834 09	3,112 86
8	16,185 00	14,451 37	2,952 10	7,774 92	41,363 39	3,131 45
9	6,057 89	685 77	119 09	5,484 02	12,346 77	.....
10	8,010 00	8,988 62	656 90	4,496 55	22,152 07	1,092 48
11	1,550 00	300 00	.....	780 00	2,630 00	812 02
12	19,245 00	32,940 24	.....	46,009 03	98,194 27	7,436 93
13	8,708 00	105 70	.....	5,277 82	14,091 52	.....
14	6,177 50	889 69	.....	2,994 21	10,061 40	1,111 34
15	3,375 00	948 02	98 12	1,904 94	6,326 08	1,001 52
16	1,904 46	2,920 39	97 74	969 91	5,892 50	647 68
17	2,635 00	330 00	15 00	588 65	3,568 65	3,760 00
18	6,935 00	3,233 03	214 65	3,921 70	14,304 38	3,056 32
19	2,962 00	646 59	93 96	1,686 17	5,388 72	2,060 40
20	72,727 69	110,049 16	349 52	46,024 14	229,150 51	.....
21	10,036 72	2,164 35	284 89	13,008 60	25,494 56	6,271 58
22	900 00	716 10	105 52	325 14	2,046 76	4 06
	201,560 89	208,272 76	5,441 50	154,984 66	570,259 81	42,571 76

ROMAN CATHOLIC

I. TABLE F—FINANCIAL

Towns	Number of Schools	Receipts			
		Legislative Grants	Municipal Grants and Assessments	Balances, subscribed and other sources	Total amount received
		$ c.	$ c.	$ c.	$ c.
1 Alexandria	2	206 00	6,860 98	1,309 73	8,376 71
2 Almonte	1	86 00	1,001 64	2,024 39	3,112 03
3 Amherstburg	2	139 00	2,958 18	1,965 93	5,063 11
4 Arnprior	2	191 00	5,467 32	155 37	5,813 69
5 Barrie	1	101 00	1,890 00	896 33	2,887 33
6 Bonfield	1	.....	912 54	1,031 29	1,943 83
7 Brockville	1	185 00	3,700 00	.....	3,885 00
8 Cache Bay	1	.....	450 00	573 20	1,023 20
9 Charlton	1	21 00	650 00	399 60	1,070 60
10 Chelmsford	1	.....	2,143 57	65 67	2,209 24
11 Cobalt	2	.....	9,624 23	7,125 46	16,749 69
12 Cobourg	1	125 00	1,700 00	1,172 56	2,997 56
13 Cochrane	1	.....	3,229 37	10,159 27	13,388 64
14 Collingwood	1	60 00	2,891 67	80 82	3,032 49
15 Cornwall	4	358 00	8,394 75	3,148 90	11,901 65
16 Dundas	1	63 00	455 74	1,108 45	1,627 19
17 Eastview	1	.....	6,000 00	1,855 50	7,855 50
18 Ford	1	.....	2,165 47	174 67	2,340 14
19 Fort Frances	1	148 17	2,020 59	2,097 17	4,265 93
20 Goderich	1	54 00	884 03	205 31	1,143 34
21 Hanover	1	38 00	964 48	382 03	1,384 51
22 Hawkesbury	3	.....	6,095 35	327 29	6,422 64
23 Ingersoll	1	61 00	1,238 06	255 87	1,554 93
24 Kearney	1	126 42	685 45	360 80	1,172 67
25 Keewatin	1	108 92	707 00	120 65	936 57
26 Kenora	2	156 17	4,750 00	918 53	5,824 70
27 Lindsay	2	187 00	4,824 78	100 00	5,111 78
28 Massey	1	.....	1,262 09	931 41	2,193 50
29 Mattawa	1	931 23	2,350 00	1,797 11	5,078 34
30 Mount Forest	1	27 00	793 17	382 00	1,202 17
31 New Liskeard	1	120 17	1,300 00	477 90	1,898 07
32 Newmarket	1	40 00	978 72	830 14	1,848 86
33 North Bay	2	766 17	16,712 00	24,500 00	41,978 17
34 Oakville	1	17 00	633 12	458 60	1,108 72
35 Orillia	1	100 00	2,529 58	2,701 80	5,331 38
36 Oshawa	1	95 00	1,724 60	495 69	2,315 29
37 Owen Sound	1	82 00	2,048 82	528 86	2,659 68
38 Paris	1	37 00	793 89	6,924 47	7,755 36
39 Parkhill	1	31 00	580 26	34 39	645 65
40 Pembroke	1	265 00	8,381 71	3,345 13	11,991 84
41 Perth	1	146 00	1,646 42	339 52	2,131 94
42 Picton	1	31 00	609 90	751 73	1,392 63
43 Prescott	1	94 00	2,568 03	3,601 44	6,263 47
44 Preston	1	79 00	2,568 85	1,511 31	4,159 16
45 Rainy River	1	91 17	466 26	1,101 46	1,658 89
46 Renfrew	1	182 00	5,843 40	1,122 72	7,148 12
47*Rockland	2	.....	5,358 00	.....	5,358 00
48 St. Mary's	1	44 00	1,000 19	804 66	1,848 85
49 Sandwich	2	166 00	3,703 96	4,470 28	8,340 24
50 Seaforth	1	47 00	943 56	314 04	1,304 60

*No report received; figures of preceding year.

SEPARATE SCHOOLS—Continued

STATEMENT, ETC.—Continued

	Expenditure					
	Teachers' Salaries	Sites and building school houses	Libraries, maps, apparatus, prizes and school books	All other purposes	Total amount expended	Balances
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	2,856 00	2,206 90	70 16	3,243 65	8,376 71	.....
2	1,650 00	281 46	10 89	515 00	2,457 35	654 68
3	1,850 00	2,204 54	33 55	931 63	5,019 72	43 39
4	2,800 00	1,435 35	.....	1,179 16	5,414 51	399 18
5	1,260 00	43 23	17 32	555 67	1,876 22	1,011 11
6	1,000 00	.....	76 63	60 00	1,136 63	807 20
7	2,400 00	400 00	.....	1,085 00	3,885 00	.....
8	901 00	22 00	5 00	95 00	1,023 00	20
9	485 00	346 50	134 10	96 43	1,062 03	8 57
10	1,400 00	.....	41 49	552 89	1,994 38	214 86
11	6,220 00	3,925 30	.....	4,152 29	14,297 59	2,452 10
12	1,300 00	1,206 90	.....	432 71	2,939 61	57 95
13	1,650 00	824 00	.....	8,435 58	10,909 58	2,479 06
14	1,425 00	187 60	77 84	1,252 43	2,942 87	89 62
15	7,516 35	1,472 17	.....	2,873 73	11,862 25	39 40
16	834 19	266 65	.....	303 21	1,404 05	223 14
17	3,436 00	3,485 33	110 60	785 30	7,817 23	38 27
18	1,025 00	500 00	.....	362 83	1,887 83	452 31
19	1,380 00	1,184 60	46 45	600 24	3,211 29	1,054 64
20	600 00	123 70	25 90	355 50	1,105 10	38 24
21	660 00	.....	15 93	165 58	841 51	543 00
22	3,680 00	230 40	.....	1,776 25	5,686 65	735 99
23	612 00	124 50	31 43	346 84	1,114 77	440 16
24	500 00	300 82	3 00	100 00	903 82	268 85
25	550 00	17 90	.....	195 71	763 61	172 96
26	1,650 00	1,848 55	136 30	845 55	4,480 40	1,344 30
27	3,050 00	351 50	.....	1,529 36	4,930 86	180 92
28	977 50	242 00	.....	602 74	1,822 24	371 26
29	2,017 00	1,047 57	34 15	841 63	3,940 35	1,137 99
30	600 00	13 00	.....	217 81	830 81	371 36
31	635 00	433 55	.....	324 02	1,392 57	505 50
32	585 00	406 69	5 66	72 32	1,069 61	779 25
33	8,823 75	.....	146 00	32,919 74	41,889 49	88 68
34	500 00	257 09	.....	111 70	868 79	239 93
35	1,600 00	576 36	113 94	924 62	3,214 92	2,116 46
36	1,037 50	222 25	99 86	251 07	1,610 68	704 61
37	1,400 00	327 71	.....	771 51	2,499 22	160 46
38	600 00	6,351 37	8 95	459 10	7,419 42	335 94
39	563 00	.....	.....	62 37	625 37	20 28
40	4,527 54	3,732 25	1,038 01	442 34	9,740 14	2,251 70
41	1,400 00	218 00	18 00	362 00	1,998 00	133 94
42	525 00	22 35	46 70	55 15	649 20	743 43
43	1,408 33	1,025 30	.....	705 87	3,139 50	3,123 97
44	1,060 00	1,222 77	.....	196 79	2,479 56	1,679 60
45	400 00	1,102 16	15 95	74 80	1,592 91	65 98
46	2,440 00	3,402 67	96 95	1,208 50	7,148 12	.....
47	3,900 00	598 00	210 00	650 00	5,358 00	.....
48	600 00	503 21	.....	158 75	1,261 96	586 89
49	2,300 00	1,412 95	.....	853 27	4,566 22	3,774 02
50	800 00	12 85	.....	130 55	943 40	361 20

ROMAN CATHOLIC

I. TABLE F—FINANCIAL

Towns—Concluded	Number of Schools	Receipts: Legislative Grants	Municipal Grants and Assessments	Balances, subscribed and other sources	Total amount received
		$ c.	$ c.	$ c.	$ c.
51 Smith's Falls	1	.....	1,892 00	35,471 29	37,363 29
52 Steelton	1	274 17	5,529 45	2,334 30	8,137 92
53 Sturgeon Falls	1	.....	5,560 59	370 00	5,930 59
54 Sudbury	2	624 17	21,775 07	19,311 87	41,711 11
55 Thorold	1	124 00	3,525 94	6,366 41	10,016 35
56 Tilbury	1	.....	2,126 08	2,151 23	4,277 31
57 Timmins	1	104 17	2,732 00	967 64	3,803 81
58 Trenton	1	101 00	1,700 00	926 91	2,727 91
59 Vankleek Hill	1	.....	1,367 35	328 88	1,696 23
60 Walkerton	1	103 00	1,449 42	1,212 38	2,764 80
61 Walkerville	1	59 00	667 75	91 59	818 34
62 Wallaceburg	1	192 60	3,388 82	4,605 25	8,186 67
63 Waterloo	1	105 00	3,253 00	28 37	3,386 37
64 Weston	1	14 00	357 60	327 00	698 60
65 Whitby	1	35 00	497 56	731 44	1,264 00
Totals	80	7,542 53	203,284 36	170,664 01	381,490 90
Totals					
1 Rural Schools	315	19,782 62	198,764 18	109,133 51	327,680 31
2 Cities	126	14,225 98	462,089 15	136,516 44	612,831 57
3 Towns	80	7,542 53	203,284 36	170,664 01	381,490 90
4 Villages	16	580 50	15,764 96	9,153 95	25,499 41
5 Grand Totals, 1915	537	42,131 63	879,902 65	425,467 91	1,347,502 19
6 Grand Totals, 1914	519	44,467 71	903,988 11	518,816 99	1,467,272 81
7 Increases	18	.....	.....	.....	.....
8 Decreases	.....	2,336 08	24,085 46	93,349 08	119,770 62
9 Percentages	.....	5.12	65.29	31.57	.....

Cost per pupil, enrolled attendance: Rural Schools, $15.00; Cities, $18.20;

SEPARATE SCHOOLS—Continued

STATEMENT, ETC.—Concluded

	Expenditure					
	Teachers' Salaries	Sites and building school houses	Libraries, maps, apparatus, prizes and school books	All other purposes	Total amount expended	Balances
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
51	375 00	36,271 00	440 79	276 50	37,363 29	.....
52	3,420 00	158 30	15 00	3,155 91	6,749 21	1,388 71
53	3,270 00	.....	25 75	2,336 33	5,632 08	298 51
54	7,207 50	22,954 36	1,885 77	2,900 15	34,947 78	6,763 33
55	1,462 34	5,907 14	42 20	1,246 22	8,657 90	1,358 45
56	1,586 50	402 59	.....	442 81	2,431 90	1,845 41
57	1,385 00	831 25	.....	1,243 09	3,459 34	344 47
58	450 00	1,168 99	8 00	1,019 55	2,646 54	81 37
59	1,050 00	69 50	.....	250 00	1,369 50	326 73
60	1,300 00	77 46	34 82	930 53	2,342 81	421 99
61	550 00	.....	83 26	185 08	818 34	.....
62	1,250 00	1,996 26	27 98	848 14	4,122 38	4,064 29
63	1,400 00	1,167 71	25 00	750 00	3,342 71	43 66
64	625 00	20 00	15 00	30 00	690 00	8 60
65	525 00	486 00	.....	121 69	1,132 69	131 31
	117,246 50	117,630 56	5,274 27	90,960 19	331,111 52	50,379 38
1	172,583 30	37,319 94	3,410 86	48,280 04	261,594 14	66,086 17
2	201,560 89	208,272 76	5,441 50	154,984 66	570,259 81	42,571 76
3	117,246 50	117,630 56	5,274 27	90,960 19	331,111 52	50,379 38
4	12,555 43	3,401 49	294 30	4,630 82	20,882 04	4,617 37
5	503,946 12	366,624 75	14,420 93	298,855 71	1,183,847 51	163,654 68
6	509,756 93	445,695 65	22,398 56	347,364 93	1,325,216 07	142,056 74
7	.....	.....	.....	.....	.....	21,597 94
8	5,810 81	79,070 90	7,977 63	48,509 22	141,368 56	.....
9	42.57	30.97	1.21	25.24	.....	.....

Towns, $19.27; Villages, $13.55; Province, $17.54.

ROMAN CATHOLIC

II. TABLE G—TEACHERS, SALARIES, CERTIFICATES, ATTENDANCE,

Rural Schools	Teachers												
	Number of Teachers	Male	Female	Av. salary, male	Av. salary, female	No. who have ever attended a Model School in Ont.	No. who have ever attended a Normal Sch'l in Ont.	No. who have ever attended the Normal College or F. of E. in Ont.	Number of University Graduates	1st Class or Interim 1st Class	2nd Class or Interim 2nd Class	3rd Class	District
				$	$								
1 Bruce	15	3	12	592	469	1	7	1	....	1	7	1	....
2 Carleton	20	....	20	.....	394	7	6	.....	....	....	6	4	2
3 Essex	36	1	35	500	493	19	11	1	....	1	10	20	1
4 Frontenac	11	1	10	600	485	3	8	.....	....	....	7	4	....
5 Grey	7	....	7	.....	537	.....	7	.....	....	....	7	....	....
6 Hastings	6	....	6	.....	475	3	3	.....	....	....	3	3	....
7 Huron	10	1	9	500	533	2	6	2	....	2	6	2	....
8 Kent	8	2	6	650	567	4	2	1	....	1	2	4	....
9 Lambton	1	....	1	.....	625	.....	1	.....	....	....	1	....	....
10 Lanark	3	....	3	.....	450	2	.....	1	....	1	....	2	....
11 Leeds & Grenville	2	....	2	.....	362	1	.....	.....	....	....	....	1	....
12 Lennox & Add'gton	2	....	2	.....	462	1	1	.....	....	....	1	1	....
13 Middlesex	5	....	5	.....	553	.....	4	1	....	1	4	....	....
14 Norfolk	1	....	1	.....	600	.....	1	.....	....	....	1	....	....
15 Northumberland and Durham	6	....	6	.....	404	1	5	.....	....	....	4	2	....
16 Ontario	1	....	1	.....	600	.....	1	.....	....	....	1	....	....
17 Peel	1	....	1	.....	500	1	1	.....	....	....	1	....	....
18 Perth	10	1	9	600	661	2	6	2	....	2	6	1	....
19 Peterborough	2	....	2	.....	575	.....	2	.....	....	....	2	....	....
20 Prescott & Russell	122	5	117	490	379	72	4	.....	....	....	4	65	13
21 Renfrew	21	1	20	625	442	4	14	.....	....	....	13	4	....
22 Simcoe	8	....	8	.....	422	.....	4	.....	....	....	4	....	....
23 Stormont, Dundas and Glengarry	25	2	23	487	453	16	8	2	1	3	5	5	1
24 Victoria	2	....	2	.....	625	.....	1	1	....	....	1	1	....
25 Waterloo	12	1	11	700	443	1	5	.....	....	....	5	1	....
26 Wellington	6	....	6	.....	584	.....	6	.....	....	....	6	....	....
27 Districts	56	6	50	508	394	13	1	2	....	2	1	6	19
Totals	399	24	375	545	438	153	115	14	1	14	108	127	36
Cities													
1 Belleville	6	....	6	.....	217	5	4	.....	....	....	4	....	....
2 Kitchener (Berlin)	15	....	15	.....	421	3	11	.....	....	....	10	1	....
3 Brantford	9	....	9	.....	267	7	1	.....	....	....	1	....	....
4 Chatham	8	....	8	.....	428	.....	8	.....	....	....	8	....	....
5 Fort William	19	....	19	.....	600	9	14	2	....	2	15	1	....
6 Galt	2	....	2	.....	550	1	1	.....	....	....	1	1	....
7 Guelph	11	....	11	.....	409	3	5	.....	....	....	5	3	....
8 Hamilton	55	3	52	767	271	25	17	5	3	5	17	2	....
9 Kingston	15	1	14	900	361	13	12	1	....	1	12	....	....
10 London	28	....	28	.....	306	1	23	4	2	4	23	....	....
11 Niagara Falls	4	....	4	.....	387	1	2	.....	....	....	2	1	....
12 Ottawa	186	38	148	697	454	114	16	.....	....	3	73	58	9
13 Peterborough	27	....	27	.....	343	8	24	2	....	2	23	2	....
14 Port Arthur	10	....	10	.....	570	.....	8	1	....	....	1	8	....
15 St. Catharines	10	....	10	.....	350	2	5	.....	....	....	5	1	....
16 St. Thomas	6	....	6	.....	300	.....	6	.....	1	....	6	....	....
17 Sarnia	7	....	7	.....	376	.....	3	.....	....	....	4	1	....
18 Sault. Ste. Marie	13	....	13	.....	504	2	7	.....	....	....	7	2	1
19 Stratford	8	....	8	.....	369	5	3	.....	....	....	3	....	....
20 Toronto	162	25	137	624	413	37	115	13	6	14	101	5	....
21 Windsor	26	....	26	.....	392	5	16	1	....	1	17	5	....
22 Woodstock	3	....	3	.....	300	2	3	.....	....	....	3	....	....
Totals	630	67	563	676	403	243	304	29	12	32	341	91	10

SEPARATE SCHOOLS—Continued

PUPILS IN THE VARIOUS BRANCHES OF INSTRUCTION, ETC.

	Temporary	Permanent Ungraded	Number of Pupils	Boys	Girls	Average daily attendance	Percentage of average to total attendance	Reading: First Reader, Part I, or Primer	Reading: First Reader, Part II, or 1st Book	Reading: Second Book	Reading: Third Book	Reading: Fourth Book	Reading: Beyond 4th Book	Art
1	.....	6	654	343	311	500	76	107	92	178	126	139	12	654
2	7	1	898	454	444	508	57	264	162	183	173	104	12	896
3	4	.....	1,828	943	885	1,204	66	573	401	359	258	234	3	1,766
4	.....	.....	301	169	132	186	62	58	27	50	54	107	5	301
5	.....	.....	252	122	130	146	58	39	34	61	60	57	1	252
6	.....	.....	173	84	89	95	55	31	17	34	39	52	.....	173
7	.....	.....	326	159	167	212	65	65	49	59	73	76	4	326
8	1	.....	349	175	174	217	62	111	82	59	45	49	3	283
9	.....	.....	40	20	20	27	67	2	8	5	14	11	.....	40
10	.....	.....	97	46	51	60	62	26	13	16	19	20	3	75
11	1	.....	26	9	17	12	46	7	6	6	.....	7	.....	12
12	.....	.....	58	28	30	31	53	14	.....	16	15	13	.....	58
13	.....	.....	97	52	45	59	60	16	7	16	26	29	3	97
14	.....	.....	63	25	38	41	65	8	5	16	15	19	.....	63
15	.....	.....	121	66	55	83	69	22	11	24	22	41	1	121
16	.....	.....	46	22	24	38	83	8	8	7	7	16	.....	46
17	.....	.....	24	14	10	18	75	4	4	9	3	4	.....	24
18	.....	1	392	196	196	267	68	72	59	52	79	88	42	392
19	.....	.....	92	59	33	62	67	13	11	19	21	28	.....	92
20	38	2	5,960	2,983	2,977	3,877	65	2,528	1,069	1,089	843	384	47	4,505
21	4	.....	875	453	422	485	55	228	153	152	163	125	54	841
22	3	1	383	208	175	246	64	103	90	77	56	57	.....	383
23	9	2	1,138	604	534	662	58	401	153	196	168	136	84	990
24	.....	.....	88	45	43	62	70	10	12	16	16	34	.....	88
25	3	3	483	266	217	345	71	108	71	103	123	78	.....	483
26	.....	.....	176	83	93	103	58	39	18	27	32	57	3	176
27	28	.....	2,493	1,223	1,270	1,227	49	1,142	524	393	280	154	.....	1,506
	98	16	17,433	8,851	8,582	10,773	61.80	5,999	3,086	3,222	2,730	2,119	277	14,643
1	.....	2	302	144	158	234	77	68	58	50	46	80	.....	302
2	.....	4	846	447	399	671	79	156	128	210	185	167	.....	846
3	1	7	478	218	260	361	75	148	73	80	117	60	.....	478
4	.....	.....	357	174	183	273	76	107	71	45	61	73	.....	357
5	.....	1	1,136	598	538	777	68	461	248	181	158	88	.....	1,136
6	.....	.....	131	71	60	99	75	14	30	46	21	20	.....	131
7	.....	3	551	312	239	423	77	142	104	115	89	101	.....	551
8	8	23	2,479	1,281	1,198	2,083	84	593	374	361	506	363	282	2,479
9	.....	2	773	455	318	527	68	168	134	168	166	137	.....	773
10	.....	1	1,092	550	542	795	73	289	198	178	190	172	65	1,062
11	.....	1	185	96	89	146	78	38	18	41	42	46	.....	185
12	23	20	8,963	4,124	4,839	6,222	69	2,925	1,552	1,800	1,399	1,046	241	8,849
13	.....	.....	1,188	611	577	870	73	283	175	148	217	193	172	1,143
14	.....	1	478	241	237	390	82	141	75	95	92	75	.....	478
15	.....	4	468	261	207	332	71	95	58	111	108	96	.....	468
16	.....	.....	262	138	124	186	71	62	37	37	51	75	.....	262
17	.....	2	310	139	171	250	81	60	49	60	99	42	.....	310
18	3	.....	690	372	318	453	66	211	93	177	121	88	.....	690
19	.....	5	356	198	158	283	79	89	55	47	86	79	.....	356
20	2	40	8,655	4,551	4,104	5,970	69	1,905	1,446	1,686	1,747	1,247	624	8,655
21	1	2	1,499	778	721	907	61	443	205	332	284	235	.....	1,499
22	.....	.....	128	54	74	89	70	35	18	22	26	27	.....	128
	38	118	31,327	15,813	15,514	22,341	71.32	8,433	5,199	5,990	5,811	4,510	1,384	31,138

ROMAN CATHOLIC

II. TABLE G—TEACHERS, SALARIES, CERTIFICATES, ATTENDANCE.

Rural Schools—Concluded	Geography	Music	Literature	Composition	Grammar	English History	Canadian History	Physiology and Hygiene	Nature Study	Physical Culture	Bookkeeping
1 Bruce	654	654	654	654	151	455	455	654	654	654	9
2 Carleton	696	462	350	711	376	204	507	585	576	605	14
3 Essex	1,313	1,310	1,428	1,595	577	496	637	1,229	1,306	1,634	1
4 Frontenac	301	301	301	301	139	172	180	301	301	301	....
5 Grey	252	252	252	252	58	179	179	252	252	252	....
6 Hastings	173	173	173	173	52	124	124	173	173	173	....
7 Huron	326	326	326	326	78	150	176	326	326	326	4
8 Kent	228	219	234	222	119	71	97	185	175	268	2
9 Lambton	40	40	40	40	11	11	25	40	40	40	....
10 Lanark	57	73	97	93	35	29	57	66	70	97	2
11 Leeds & Grenville	10	8	10	10	3	3	8	8	16	.....	....
12 Lennox & Add'tn.	58	58	58	58	9	22	22	58	58	58	....
13 Middlesex	97	97	97	97	32	35	58	97	97	97	....
14 Norfolk	63	63	63	63	19	19	15	63	63	63	....
15 Northumberland and Durham	121	121	121	121	42	88	88	121	121	121	....
16 Ontario	46	46	46	46	16	30	30	46	46	46	....
17 Peel	24	24	24	24	4	7	7	24	24	24	....
18 Perth	392	392	392	392	130	180	203	353	353	392	42
19 Peterborough	92	92	92	92	28	68	68	92	92	92	....
20 Prescott & Russell	3,974	3,569	3,292	4,578	2,483	872	2,531	3,845	3,224	3,131	44
21 Renfrew	823	841	831	846	256	396	415	812	840	841	25
22 Simcoe	383	383	383	383	57	186	186	383	383	383	....
23 Stormont, Dundas and Glengarry	775	812	741	899	281	308	401	716	771	827	42
24 Victoria	88	88	88	88	34	66	66	88	88	88	....
25 Waterloo	483	483	483	483	78	302	302	483	483	483	12
26 Wellington	176	176	176	176	60	119	119	176	176	176	1
27 Districts	1,445	1,255	1,506	1,753	762	368	710	1,405	1,121	1,613	4
Totals	13,090	12,258	12,258	14,476	5,890	4,960	7,666	12,581	11,829	12,785	202
Cities.											
1 Belleville	302	302	302	302	80	126	126	302	302	302	....
2 Kitchener (Berlin)	846	846	846	846	167	97	167	846	846	846	....
3 Brantford	478	478	478	478	60	177	177	478	478	478	....
4 Chatham	357	357	357	357	73	179	179	357	357	357	....
5 Fort William	1,136	1,136	1,136	1,136	88	427	427	1,136	1,136	1,136	....
6 Galt	131	131	131	131	41	41	41	131	131	131	....
7 Guelph	551	551	551	551	101	305	305	551	551	551	....
8 Hamilton	2,479	2,479	2,479	2,479	645	1,151	1,151	2,167	2,167	2,479	125
9 Kingston	773	773	773	773	137	263	346	773	773	773	....
10 London	1,092	1,092	1,092	1,092	237	368	444	1,027	1,027	1,092	65
11 Niagara Falls	185	185	185	185	46	88	88	185	185	185	....
12 Ottawa	7,810	7,612	7,603	8,208	2,958	1,971	4,795	7,972	8,622	8,069	458
13 Peterborough	1,143	1,188	1,188	1,188	365	730	730	1,016	1,016	1,016	22
14 Port Arthur	478	478	478	478	75	167	167	478	478	478	....
15 St. Catharines	468	468	468	468	96	96	204	468	468	468	....
16 St. Thomas	262	262	262	262	75	200	200	262	262	262	....
17 Sarnia	310	310	310	310	42	42	141	310	310	310	....
18 Sault Ste. Marie	690	690	690	690	88	209	209	690	690	690	....
19 Stratford	356	356	356	356	79	212	212	356	356	356	....
20 Toronto	8,655	8,655	8,655	8,655	3,723	3,304	3,304	8,655	8,655	8,655	171
21 Windsor	1,499	1,499	1,499	1,499	388	284	344	1,499	1,499	1,499	....
22 Woodstock	128	128	128	128	27	53	93	128	128	128	....
Totals	30,129	29,976	29,967	30,572	9,591	10,490	13,850	29,787	30,437	30,261	841

SEPARATE SCHOOLS—Continued

PUPILS IN THE VARIOUS BRANCHES OF INSTRUCTION, ETC.—Continued

	Arithmetic and Mensuration	Algebra	Geometry	Latin	French (beyond 4th Book)	French (Primer to 4th Book, inclusive)	German (beyond 4th Book)	German (Primer to 4th Book, inclusive)	Elementary Science	Commercial Subjects	Agriculture	Manual Training	Household Science	Maps, Globes and Prizes: Number of Maps	Number of Globes	No. of Schools giving Prizes	Number of Trees planted on Arbor Day
1	11	11	2	11	.....	.....	11	321	....	....	116	.....	79	95	12	7	14
2	12	12	12	...	12	632	....	....	12	....	27	46	....	130	17	7	4
3	3	3	3	...	.....	1,432	....	....	....	....	58	.....	....	256	28	5	10
4	3	3	3	2	2	.....	....	....	....	....	61	23	....	95	10	7	3
5	1	1	1	1	.....	.....	....	....	1	....	.....	.....	....	77	5	1	2
6	.....	.....	...	...	.....	.....	....	....	....	....	16	.....	....	40	5	1	....
7	4	4	...	...	.....	.....	....	....	....	40	80	.....	....	110	11	3	21
8	3	3	3	1	1	230	....	....	1	1	27	.....	....	73	8	3	....
9	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	17	1	....	....
10	3	3	3	2	2	2	....	....	....	....	.....	.....	....	15	2	....	....
11	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	13	2	....	....
12	.....	.....	...	...	.....	.....	....	....	....	....	50	.....	....	23	2	....	....
13	3	3	...	1	.....	.....	....	....	....	....	23	.....	....	65	5	2	....
14	.....	.....	...	...	.....	.....	....	....	....	....	63	.....	....	18	1	....	2
15	1	1	1	1	1	.....	....	....	....	....	57	.....	....	44	6	1	....
16	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	8	1	....	50
17	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	10	1	....	....
18	42	40	32	39	39	.....	....	....	39	39	91	.....	....	75	8	....	....
19	.....	.....	...	...	.....	.....	....	....	....	....	65	45	....	17	2	....	....
20	36	36	36	...	47	5,757	....	....	36	6	391	447	22	584	88	37	67
21	39	52	52	50	43	69	....	....	39	1	167	18	....	141	11	5	....
22	.....	.....	...	...	.....	313	....	....	....	....	.....	.....	....	40	5	2	12
23	84	84	77	45	8	566	....	....	84	....	40	.....	....	116	13	4	29
24	.....	.....	...	...	.....	.....	....	....	....	....	88	.....	88	16	2	1	....
25	4	.....	...	...	.....	.....	....	291	....	....	75	60	28	98	10	6	3
26	3	3	1	...	.....	.....	....	....	1	....	20	43	....	48	7	2	....
27	.....	.....	...	...	.....	2,141	....	....	....	....	98	282	80	185	37	22	....
	252	259	226	153	155	11,142	11	612	213	87	1,613	964	297	2,409	300	116	217
1	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	18	2	1	....
2	.....	.....	...	...	.....	.....	....	690	....	....	.....	47	50	40	4	....	....
3	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	19	2	....	....
4	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	25	5	....	....
5	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	15	2	....	....
6	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	7	1	....	....
7	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	13	3	....	....
8	282	157	157	157	157	.....	81	....	157	125	.....	.....	508	162	37	11	....
9	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	38	7	....	....
10	65	65	65	33	33	.....	....	....	35	55	.....	.....	....	89	15	9	....
11	.....	.....	...	...	.....	.....	....	....	....	....	.....	185	....	3	1	....	....
12	282	282	251	62	292	4,605	....	....	231	125	62	3,597	90	523	69	10	....
13	172	172	95	117	172	.....	7	....	143	22	35	.....	60	27	5	4	....
14	.....	.....	...	...	.....	.....	....	....	....	....	.....	20	25	20	2	....	....
15	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	23	3	....	....
16	.....	.....	...	...	.....	.....	....	....	....	....	.....	47	28	18	2	....	....
17	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	24	2	2	....
18	.....	.....	...	...	.....	.....	....	....	....	....	55	25	30	14	1	3	....
19	.....	.....	...	...	.....	.....	....	....	....	....	.....	87	78	18	1	1	....
20	416	396	295	390	551	525	55	....	430	171	.....	.....	....	197	24	33	....
21	.....	.....	...	...	.....	111	....	....	....	....	.....	.....	....	38	7	....	....
22	.....	.....	...	...	.....	.....	....	....	....	....	.....	.....	....	10	2	1	....
	1,217	1,072	863	759	1,205	5,241	143	690	996	498	152	4,008	869	1,341	197	75	....

ROMAN CATHOLIC

II. TABLE G—TEACHERS, SALARIES, CERTIFICATES, ATTENDANCE,

Towns	Teachers												
	Number of Teachers	Male	Female	Av. salary, male	Av. salary, female	Number who have ever attended a Model School in Ontario	Number who have ever attended a Normal School in Ontario	Number who have ever attended the Normal Coll. or F. of E. in Ontario	Number of University graduates	1st Class or Interim 1st Class	2nd Class or Interim 2nd Class	3rd Class	District
				$	$								
1 Alexandria ...	11	....	11	...	240	1	3	.....	....	....	3	1	....
2 Almonte	3	....	3	...	550	2	3	.....	....	....	3	.....	....
3 Amherstburg .	8	....	8	...	244	4	4	.....	....	....	4	.....	....
4 Arnprior.....	8	....	8	...	350	5	5	.....	....	....	5	.....	....
5 Barrie	4	....	4	...	350	1	2	.....	....	....	2	.....	....
6 Bonfield	2	....	2	...	500	1	.....	.....	....	....	.....	.....	....
7 Brockville	8	....	8	...	312	4	3	.....	....	....	3	3	....
8 Cache Bay	2	....	2	...	450	.....	.....	.....	....	....	.....	.....	1
9 Charlton	1	....	1	...	550	1	.....	.....	....	....	.....	.....	1
10 Chelmsford ...	4	....	4	...	350	1	.....	.....	....	....	.....	1	....
11 Cobalt	9	....	9	...	522	1	3	.....	....	....	3	1	....
12 Cobourg	4	....	4	...	325	1	3	.....	....	....	3	.....	....
13 Cochrane.....	4	....	4	...	412	.....	.....	.....	....	....	.....	.....	....
14 Collingwood ..	2	....	2	...	562	2	2	.....	....	....	2	.....	....
15 Cornwall	20	7	13	429	396	13	5	.....	....	....	4	11	....
16 Dundas	3	....	3	...	283	1	1	.....	....	....	1	.....	....
17 Eastview	11	1	10	600	280	11	.....	.....	....	....	.....	11	....
18 Ford	4	....	4	...	269	2	.....	.....	....	....	.....	1	1
19 Fort Frances..	4	....	4	...	375	.....	.....	.....	....	....	.....	.....	....
20 Goderich	2	....	2	...	300	1	1	.....	....	....	1	.....	....
21 Hanover.....	1	....	1	...	675	.....	.....	.....	....	....	.....	1	....
22 Hawkesbury ..	18	....	18	...	217	3	1	.....	....	....	1	4	2
23 Ingersoll	2	....	2	...	300	1	1	.....	....	....	1	.....	....
24 Kearney	1	....	1	...	500	.....	1	.....	....	....	.....	.....	....
25 Keewatin.	1	....	1	...	550	.....	.....	.....	....	....	.....	.....	....
26 Kenora	6	1	5	550	220	.....	.....	.....	....	....	.....	.....	....
27 Lindsay	7	1	6	950	350	1	5	.....	....	....	5	1	....
28 Massey	2	....	2	...	500	1	.....	.....	....	....	.....	1	1
29 Mattawa	6	....	6	...	308	2	2	.....	....	....	2	1	....
30 Mount Forest .	2	....	2	...	350	.....	1	.....	....	....	1	.....	....
31 New Liskeard	1	....	1	...	650	1	1	.....	....	....	1	.....	....
32 Newmarket...	1	....	1	...	600	.....	1	.....	....	....	1	.....	....
33 North Bay....	17	....	17	...	523	1	16	.....	....	....	16	1	....
34 Oakville	1	....	1	...	500	.....	1	.....	....	....	1	.....	....
35 Orillia	4	....	4	...	400	1	2	.....	....	....	2	.....	....
36 Oshawa	3	....	3	...	300	.....	1	.....	....	....	1	.....	....
37 Owen Sound ..	4	....	4	...	350	.....	3	.....	1	....	3	.....	....
38 Paris	2	....	2	...	300	1	1	.....	....	....	1	.....	....
39 Parkhill.....	1	....	1	...	550	.....	1	.....	....	....	1	.....	....
40 Pembroke.....	11	....	11	...	390	.....	6	.....	....	....	6	1	....
41 Perth	4	....	4	...	350	4	4	.....	....	....	4	.....	....
42 Picton	1	....	1	...	600	1	1	.....	....	....	1	.....	....
43 Prescott	4	....	4	...	325	2	2	.....	....	....	2	.....	....
44 Preston.....	4	....	4	...	325	.....	2	.....	....	....	2	.....	....
45 Rainy River ..	1	....	1	...	450	.....	.....	.....	....	....	.....	.....	....
46 Renfrew	7	....	7	...	357	2	3	.....	....	....	3	.....	....
47*Rockland	15	....	15	...	260	4	.....	.....	....	....	.....	8	3
48 St. Mary's	2	....	2	...	300	1	1	.....	....	....	1	.....	....
49 Sandwich.....	7	....	7	...	329	1	6	.....	....	....	5	2	....
50 Seaforth.....	2	....	2	...	400	1	1	.....	....	....	1	.....	....
51 Smith's Falls.	5	....	5	...	300	.....	4	.....	....	....	4	.....	....
52 Steelton	7	....	7	...	507	1	3	.....	....	....	3	.....	1
53 Sturgeon Falls	9	....	9	...	363	6	.....	.....	....	....	.....	6	....

*Figures of preceding year; no report received.

SEPARATE SCHOOLS—Continued

PUPILS IN THE VARIOUS BRANCHES OF INSTRUCTION, ETC.—Continued

	Temporary	Permanent Ungraded	Number of Pupils	Boys	Girls	Average daily attendance	Percentage of average to total attendance	Reading						Art
								First Reader, Part I, or Primer	First Reader, Part II, or 1st Book	Second Book	Third Book	Fourth Book	Beyond 4th Book	
1	2	5	560	276	284	434	77	215	50	112	107	76	.....	560
2	.....	.....	134	66	68	119	88	27	14	30	38	25	.....	134
3	.....	4	347	130	217	251	72	82	43	62	72	64	24	347
4	2	1	430	226	204	325	75	127	52	97	85	69	.....	430
5	.....	2	144	73	71	105	73	29	16	37	32	30	.....	144
6	2	.....	144	66	78	72	50	39	20	63	14	8	.....	.....
7	.....	2	316	146	170	248	78	67	37	79	68	65	.....	316
8	.....	1	153	84	69	85	55	70	43	20	18	2	.....	153
9	.....	.....	49	20	29	26	53	21	6	6	9	5	2	49
10	2	1	195	80	115	135	69	62	53	40	22	18	.....	195
11	5	.....	643	357	286	251	39	201	132	112	120	78	.....	269
12	.....	1	159	79	80	115	72	34	18	34	35	38	.....	159
13	4	.....	264	124	140	148	56	46	106	54	49	9	.....	264
14	.....	.....	85	41	44	59	69	20	9	15	18	23	.....	85
15	1	4	1,021	493	528	737	72	346	194	203	165	113	.....	1,021
16	.....	2	126	68	58	84	66	31	25	23	15	32	.....	126
17	.....	.....	718	347	371	367	51	452	137	53	47	29	.....	718
18	1	1	229	121	108	139	60	82	55	52	21	19	.....	229
19	4	.....	189	103	86	127	67	66	41	30	27	22	3	189
20	.....	1	77	37	40	64	83	14	10	10	21	22	.....	77
21	.....	.....	81	41	40	74	91	35	10	20	7	9	.....	81
22	11	.....	1,094	536	558	851	78	334	227	241	202	57	33	1,094
23	.....	1	92	44	48	69	75	20	15	15	29	13	.....	92
24	1	.....	50	26	24	31	62	11	10	10	13	6	.....	50
25	1	.....	42	20	22	23	54	10	7	13	8	4	.....	42
26	6	.....	248	128	120	171	68	118	32	34	42	22	.....	248
27	1	.....	297	149	148	236	79	51	45	69	61	71	.....	297
28	.....	.....	129	62	67	63	48	65	17	25	10	12	.....	129
29	.....	3	345	184	161	230	67	101	44	63	57	69	11	345
30	.....	1	60	24	36	48	80	17	10	13	12	8	.....	60
31	.....	.....	60	33	27	35	58	21	10	11	8	10	.....	60
32	.....	.....	64	44	20	45	70	13	10	13	12	16	.....	64
33	.....	.....	797	385	412	683	86	273	121	148	160	95	.....	797
34	.....	.....	43	15	28	29	67	9	3	8	8	15	.....	43
35	.....	2	168	95	73	135	80	40	11	36	34	47	.....	168
36	.....	2	123	63	60	93	75	43	20	23	27	10	.....	123
37	.....	1	172	92	80	121	70	32	22	51	47	20	.....	172
38	.....	1	75	35	40	57	76	16	14	17	9	19	.....	75
39	.....	.....	40	22	18	28	70	8	7	6	7	12	.....	40
40	1	3	628	330	298	439	70	196	89	104	118	121	.....	628
41	.....	.....	237	118	119	183	77	46	18	61	59	53	.....	237
42	.....	.....	40	20	20	23	57	12	7	1	9	11	.....	40
43	1	1	145	75	70	118	81	32	15	29	31	38	.....	145
44	.....	2	201	100	101	144	71	46	30	58	43	24	.....	201
45	1	.....	35	15	20	26	74	15	4	6	6	4	.....	35
46	1	3	389	209	180	295	76	125	61	53	88	62	.....	389
47	4	.....	922	491	431	575	62	417	262	142	77	24	.....	922
48	.....	1	66	30	36	51	77	11	10	13	8	24	.....	66
49	.....	.....	347	181	166	210	60	178	47	56	47	19	.....	169
50	.....	1	68	43	25	36	53	18	8	14	14	14	.....	68
51	1	.....	213	105	108	69	32	59	38	49	40	27	.....	213
52	2	1	357	161	196	221	62	99	77	65	80	36	.....	357
53	3	.....	541	277	264	329	61	243	97	83	65	53	.....	541

ROMAN CATHOLIC

II. TABLE G—TEACHERS, SALARIES, CERTIFICATES, ATTENDANCE,

Towns—Con.	Geography	Music	Literature	Composition	Grammar	English History	Canadian History	Physiology and Hygiene	Nature Study	Physical Culture	Bookkeeping
1 Alexandria	560	560	560	560	76	295	295	295	560	560	.....
2 Almonte	134	134	134	134	25	63	63	134	134	134	.....
3 Amherstburg ..	347	347	347	347	88	187	158	347	347	347	5
4 Arnprior.....	430	430	430	430	69	154	430	430	430	430	.....
5 Barrie.....	144	144	144	144	30	99	99	144	144	144	.....
6 Bonfield	113	.....	.....	144	113	130	130	.....	.....	.....	.....
7 Brockville	316	316	316	316	65	139	217	316	316	316	.....
8 Cache Bay.....	140	.....	20	153	38	2	63	153	153	.....	.....
9 Charlton	49	49	49	49	16	16	22	49	49	49	2
10 Chelmsford	195	195	195	195	90	40	80	195	195	195	18
11 Cobalt	333	643	333	333	306	269	333	269	269	643	.....
12 Cobourg	159	159	159	159	38	107	107	159	159	159	.....
13 Cochrane.....	264	264	218	264	9	9	98	264	264	264	.....
14 Collingwood....	85	85	85	85	23	56	56	85	85	85	.....
15 Cornwall	1,021	1,021	1,021	1,021	113	278	278	1,021	1,021	1,021	.....
16 Dundas	126	126	126	126	70	70	70	126	126	126	.....
17 Eastview.....	718	718	319	718	399	79	402	718	718	256	.....
18 Ford	229	229	229	229	92	19	40	40	229	.....	.....
19 Fort Frances...	189	189	189	189	28	49	49	189	189	189	3
20 Goderich.....	77	77	77	77	22	43	53	77	77	77	.....
21 Hanover	81	81	81	81	9	36	36	81	81	81	.....
22 Hawkesbury ...	1,094	1,094	1,094	1,094	533	292	533	1,094	1,094	1,094	292
23 Ingersoll	92	92	92	92	13	42	42	92	92	92	.....
24 Kearney.....	50	50	50	50	19	19	1'	50	50	50	.....
25 Keewatin	42	42	42	42	12	12	12	42	42	42	.....
26 Kenora	248	248	248	248	64	64	98	248	248	248	.....
27 Lindsay	297	297	297	297	71	201	201	297	297	297	.....
28 Massey	47	129	47	70	12	12	12	47	47	79	.....
29 Mattawa	345	345	345	345	80	345	345	345	345	345	11
30 Mount Forest ..	60	60	60	60	8	33	33	60	60	60	.....
31 New Liskeard..	60	60	60	60	10	10	18	60	60	60	.....
32 Newmarket	64	64	64	64	28	28	28	64	64	64	.....
33 North Bay.....	797	797	797	797	255	255	255	797	797	797	.....
34 Oakville	43	43	43	43	15	23	23	43	43	43	.....
35 Orillia.....	168	168	168	168	47	117	117	168	168	168	.....
36 Oshawa	123	123	123	123	10	60	60	123	123	123	.....
37 Owen Sound ...	172	172	172	172	20	118	118	172	172	172	.....
38 Paris	75	75	75	75	19	28	28	75	75	75	.....
39 Parkhill.....	40	40	40	40	12	19	25	40	40	40	.....
40 Pembroke	628	628	628	628	121	239	239	628	628	628	.....
41 Perth	191	237	237	237	112	112	173	237	237	237	.....
42 Picton.....	40	40	40	40	11	21	21	40	40	40	.....
43 Prescott.....	113	145	145	145	69	69	69	145	145	145	.....
44 Preston	201	201	201	201	24	67	125	201	201	201	.....
45 Rainy River ...	35	35	35	35	10	10	10	35	35	35	.....
46 Renfrew.....	389	389	389	389	150	150	150	389	389	389	.....
47 Rockland	922	922	86	922	922	50	922	922	922	922	.....
48 St. Mary's.....	66	66	66	66	24	32	32	66	66	66	.....
49 Sandwich.....	169	347	169	347	66	66	169	169	347	347	.....
50 Seaforth.....	68	68	68	68	14	28	42	68	68	68	.....
51 Smith's Falls..	213	213	143	213	67	67	67	107	213	213	.....
52 Steelton	357	357	357	357	116	116	181	357	357	357	36
53 Sturgeon Falls.	541	541	541	541	53	53	166	541	541	541	.....

SEPARATE SCHOOLS—Continued

PUPILS IN THE VARIOUS BRANCHES OF INSTRUCTION, ETC.—Continued

	Arithmetic and Mensuration	Algebra	Geometry	Latin	French (beyond 4th Book)	French (Primer to 4th Book, inclusive)	German (beyond 4th Book)	German (Primer to 4th Book, inclusive)	Elementary Science	Commercial Subjects	Agriculture	Manual Training	Household Science	Maps, Globes and Prizes: Number of Maps	Number of Globes	Number of Schools giving Prizes	Number of Trees planted on Arbor Day
1														10	1		
2														7	1		
3	22	22	8	22		82			22			14		22	3		
4												179		12	2		
5														28	3		
6						85								10	1		
7											146	316		10	3	1	
8						141					153			11	2	1	
9	2	2	2							2			2	6	1	1	3
10						190					40			15	1	1	
11						425								23	4		
12														13	1	1	
13						222								11	1		
14												21	20	18	2	1	
15						360						540		25	2		
16														13	2		
17						713						718		15	2		
18						193								7	2	1	5
19	3	3												15	2	1	
20														17	2	1	
21														4	1	1	
22	33	33	33		33	1,042			33			533		41	7		4
23														13	1		
24														8	1		
25														6	1	1	
26						248						202		36	1	2	
27														20	2		
28						120						47		6	1		
29	11	11	11		11	201			11					23	1		
30														10	1		
31														3	1		
32														12	1		
33						252								24	4	2	12
34														2	1		
35														17	3	1	6
36														9	1		
37												120	52	9	2	1	
38														6	1	1	
39														7	2		
40						87						628		32	1		
41														9	1		
42											28			8	1		
43														12	1		
44													100	12	1		
45						35								2	1	1	
46														16	3	1	
47						920								32	9		
48														8	1		
49						320								9	2		
50														10	1	1	
51												15	12	7	1		
52						237								17	1		
53						432								9	2		

ROMAN CATHOLIC

II. TABLE G—TEACHERS, SALARIES, CERTIFICATES, ATTENDANCE,

Towns—Continued	Teachers: Number of Teachers	Male	Female	Av. salary, male	Av. salary, female	Number who have ever attended a Model School in Ontario	Number who have ever attended a Normal School in Ontario	Number who have ever attended the Normal Coll. or F. of E. in Ontario	Number of University Graduates	1st Class or Interim 1st Class	2nd Class or Interim 2nd Class	3rd Class	District
				$	$								
54 Sudbury	14	....	14	...	525	6	6	.....	....	....	6	8	....
55 Thorold	4	....	4	...	425	1	2	.....	....	....	2	.....	....
56 Tilbury	5	....	5	...	350	3	1	.....	....	....	1	1	....
57 Timmins	3	....	3	...	600	3	.....	.....	....	....	.....	.....	....
58 Trenton	4	....	4	...	250	1	2	.....	....	....	2	1	....
59 Vankleek Hill	5	....	5	...	200	.....	.....	.....	....	....	.....	.....	2
60 Walkerton	4	....	4	...	300	.....	.....	.....	....	....	.....	.....	....
61 Walkerville	2	....	2	...	275	.....	1	.....	....	....	1	.....	....
62 Wallaceburg	5	....	5	...	260	.....	2	1	....	1	2	.....	....
63 Waterloo	4	....	4	...	350	.....	1	.....	....	....	1	1	....
64 Weston	1	....	1	...	625	.....	1	.....	....	....	1	.....	....
65 Whitby	1	....	1	...	525	.....	1	.....	....	....	1	.....	....
Totals	325	10	315	510	364	101	123	1	1	1	120	66	12
Totals													
1 Rural Schools	399	24	375	545	438	153	115	14	1	14	108	127	36
2 Cities	630	67	563	676	403	243	304	29	12	32	341	91	10
3 Towns	325	10	315	510	364	101	123	1	1	1	120	66	12
4 Villages	35	....	35	...	393	12	17	.....	....	....	17	3	....
5 Gd. Totals, 1915	1,389	101	1,288	628	403	509	559	44	14	47	586	287	58
6 Gd. Totals, 1914	1,344	92	1,252	649	395	520	535	30	9	32	528	310	60
7 Increases	45	9	36	...	8	.....	24	14	5	15	58	.....	....
8 Decreases	.....	....	.....	21	...	11	.....	.....	....	....	.....	23	2
9 Percentages	.....	7.27	92.72	...	...	36.64	40.24	3.16	1	3.38	42.19	20.66	4.17

SEPARATE SCHOOLS—Continued

PUPILS IN THE VARIOUS BRANCHES OF INSTRUCTION, ETC.—Continued

	Temporary	Permanent Unraded	Number of Pupils	Boys	Girls	Average daily attendance	Percentage of average to total attendance	Reading						Art
								First Reader, Part I, or Primer	First Reader, Part II, or 1st Book	Second Book	Third Book	Fourth Book	Beyond 4th Book	
54	.....	.....	905	444	461	516	57	369	164	156	142	74	.....	905
55	.....	2	226	127	99	139	62	53	35	49	37	52	.....	226
56	3	.....	297	143	154	180	60	108	49	70	39	31	.....	152
57	3	.....	190	85	105	85	45	37	83	51	11	8	.....	190
58	1	.....	216	101	115	127	58	60	32	40	42	42	.....	216
59	.....	3	236	124	112	141	59	69	27	44	44	52	.....	236
60	.....	4	181	101	80	148	81	24	21	44	41	51	.....	181
61	.....	1	92	48	44	70	76	22	12	35	16	7	.....	92
62	2	.....	323	150	173	229	71	95	59	60	55	37	17	323
63	.....	2	247	125	122	179	72	42	41	60	49	55	.....	247
64	.....	.....	59	28	31	36	61	14	10	9	14	12	.....	59
65	.....	.....	56	25	31	41	73	5	15	9	12	15	.....	56
	66	60	17,180	8,591	8,589	11,523	67.07	5,643	3,007	3,309	2,923	2,208	90	16,339
1	98	16	17,433	8,851	8,582	10,773	61.80	5,999	3,086	3,222	2,730	2,119	277	14,643
2	38	118	31,327	15,813	15,514	22,341	71.32	8,433	5,199	5,990	5,811	4,510	1,384	31,138
3	66	60	17,180	8,591	8,589	11,523	67.07	5,643	3,007	3,309	2,923	2,208	90	16,339
4	5	10	1,541	769	772	1,096	71.12	378	229	332	283	309	10	1,525
5	207	204	67,481	34,024	33,457	45,733	67.77	20,453	11,521	12,853	11,747	9,146	1,761	63,645
6	201	213	66,271	33,527	32,744	43,788	66.07	19,491	12,209	12,886	11,575	8,603	1,507	62,641
7	6	.....	1,210	497	713	1,945	1.70	962	.....	.....	172	543	254	1,004
8	.....	9	.....	.....	.....	.....	.....	.....	688	33	.....	.....	.....	.....
9	14.90	14.68	.....	50.42	49.58	67.77	.....	30.31	17.07	19.04	17.41	13.55	2.61	94.31

ROMAN CATHOLIC

II. TABLE G—TEACHERS, SALARIES, CERTIFICATES, ATTENDANCE,

Towns—Concluded	Geography	Music	Literature	Composition	Grammar	English History	Canadian History	Physiology and Hygiene	Nature Study	Physical Culture	Bookkeeping
54 Sudbury	905	905	905	905	216	216	372	905	905	905	.....
55 Thorold	226	226	226	226	89	52	89	226	226	226	.....
56 Tilbury.....	297	297	152	152	70	31	140	140	140	297	.....
57 Timmins	190	190	190	190	17	19	133	190	190	190	.....
58 Trenton	216	216	216	216	42	124	124	216	216	216	.....
59 Vankleek Hill.	236	236	140	236	52	96	236	236	236	236	.....
60 Walkerton	181	181	181	181	51	136	136	181	181	181	.....
61 Walkerville...	92	92	92	92	23	23	23	92	92	92	.....
62 Wallaceburg ..	323	323	323	323	54	54	109	323	323	323	.....
63 Waterloo	247	247	247	247	55	104	104	247	247	247	.....
64 Weston.....	59	59	59	59	26	35	35	59	59	59	.....
65 Whitby	56	56	56	56	15	36	36	56	56	56	56
Totals.....	16,488	16,883	14,741	16,666	5,416	5,824	8,949	15,685	16,423	16,142	423
Totals											
1 Rural Schools..	13,090	12,258	12,258	14,476	5,890	4,960	7,666	12,581	11,829	12,785	202
2 Cities.....	30,129	29,976	29,967	30,572	9,591	10,490	13,850	29,787	30,437	30,261	841
3 Towns	16,488	16,883	14,741	16,666	5,416	5,824	8,949	15,685	16,423	16,142	423
4 Villages	1,520	1,176	1,531	1,541	413	570	1,051	1,308	1,503	1,436	32
5 Gd. Totals, 1915	61,227	60,293	58,497	63,255	21,310	21,844	31,516	59,361	60,192	60,624	1,498
6 Gd. Totals, 1914	59,544	58,431	57,559	61,054	19,807	21,988	33,526	48,831	59,854	59,838	1,215
7 Increases	1,683	1,862	938	2,201	1,503	.....	.....	10,530	338	786	283
8 Decreases.....	.....	.....	.....	.....	.....	144	2,010	.....	.....	.....	.....
9 Percentages ...	90.73	89.34	86.68	93.73	31.57	32.37	46.70	87.96	89.19	89.83	2.21

SEPARATE SCHOOLS—Concluded

PUPILS IN THE VARIOUS BRANCHES OF INSTRUCTION, ETC.—Concluded

	Arithmetic and Mensuration	Algebra	Geometry	Latin	French (beyond 4th Book)	French (Primer to 4th Book, inclusive)	German (beyond 4th Book)	German (Primer to 4th Book, inclusive)	Elementary Science	Commercial Subjects	Agriculture	Manual Training	Household Science	Maps, Globes and Prizes: Number of Maps	Maps, Globes and Prizes: Number of Globes	Maps, Globes and Prizes: Number of Schools giving Prizes	Number of Trees planted on Arbor Day
54	....	....	....	....	....	674	....	....	....	....	....	905	....	19	4	....	....
55	....	....	....	....	....	....	....	....	....	....	....	....	....	7	1	....	....
56	....	....	....	....	....	243	....	....	....	....	....	....	....	7	3	1	....
57	....	....	....	....	....	....	....	....	....	....	190	....	....	6	1	1	....
58	....	....	....	....	....	....	....	....	....	....	....	....	....	7	1	....	....
59	....	....	....	....	....	198	....	....	....	....	....	....	....	10	1	....	15
60	....	....	....	....	....	....	....	....	....	....	....	....	....	13	3	1	....
61	....	....	....	....	....	53	....	....	....	....	....	....	....	11	1	1	....
62	17	17	10	17	....	....	....	....	17	....	....	....	....	7	2	1	....
63	....	....	....	....	....	....	....	205	....	....	....	125	122	12	1	1	....
64	....	....	....	....	....	....	....	....	....	....	....	....	....	10	1	....	6
65	....	....	....	....	....	....	....	....	....	....	....	....	....	3	1	1	....
	88	88	64	39	44	7,473	....	205	85	2	557	4,363	308	839	117	28	51
1	252	259	226	153	155	11,142	11	612	213	87	1,613	964	297	2,409	300	116	217
2	1,217	1,072	863	759	1,205	5,241	143	690	996	498	152	4,008	869	1,341	197	75	....
3	88	88	64	39	44	7,473	....	205	85	2	557	4,363	308	839	117	28	51
4	10	10	10	5	10	498	....	.....	9	...	148	231	148	142	19	7	26
5	1,567	1,429	1,163	956	1,414	24,354	154	1,507	1,303	587	2,470	9,566	1,622	4,731	633	226	294
6	1,199	1,410	1,135	723	1,180	24,451	111	1,397	1,074	638	1,963	5,093	1,772	4,706	629	198	329
7	368	19	28	233	234	.....	43	110	229	...	507	4,473	.....	25	4	28	....
8	....	.....	.....	...	.....	97	....	.....	.....	51	.....	.....	150	.....	.....	.....	35
9	2.30	2.11	1.72	1.41	2.09	36.09	.22	2.23	1.93	.86	3.66	14.17	2.40	*8.81	*1.18	42.08	....

* To each School.

CONTINUATION

I. TABLE H—FINAN-

Continuation Schools	Receipts						Ex-
	Legislative Grants	Municipal Grants (county)	Municipal Grants (local)	School Fees	Balances and other sources	Total Receipts	Teachers' Salaries
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1 Acton	522 09	522 09	1,000 00	331 60	132 35	2,508 13	2,010 00
2 Agincourt	.....	.....	761 34	72 00	530 51	1,363 85	400 00
3 Alvinston	539 96	789 96	790 64	599 00	.....	2,719 56	2,010 00
4 Arkona	241 35	627 13	340 31	84 00	250 23	1,543 02	840 00
5 Ayr	453 26	453 26	829 29	300 00	745 30	2,781 11	1,685 00
6 Bancroft	434 18	434 18	1,176 88	.....	25 00	2,070 24	1,698 80
7 Bath	271 93	421 93	425 00	80 00	422 58	1,621 44	1,180 00
8 Beaverton	513 93	613 93	663 26	507 00	154 78	2,452 90	1,950 00
9 Beeton	521 46	718 96	933 80	311 00	240 80	2,726 02	1,975 00
10 Belmont	365 88	1,229 64	3,300 00	283 30	223 81	5,402 63	1,710 00
11 Blenheim	543 95	543 95	1,913 35	232 00	54 00	3,287 25	1,900 00
12 Blind River	533 28	.....	435 72	31 00	.....	1,000 00	925 00
13 Blyth	352 35	704 70	471 13	220 60	9 79	1,758 57	1,425 00
14 Bothwell	434 09	434 09	992 50	165 00	53 67	2,079 35	1,675 00
15 Bowesville	220 35	220 35	425 00	59 25	62 46	987 41	800 00
16 Bracebridge	1,374 30	.....	2,267 51	637 25	.....	4,279 06	3,542 85
17 Bridgeburg	496 78	596 78	1,191 59	.....	248 81	2,533 96	1,970 00
18 Bruce Mines	961 00	.....	1,450 00	.....	11 19	2,422 19	1,830 00
19 Brussels	525 68	1,051 36	325 00	441 50	752 26	3,095 80	1,985 00
20 Burk's Falls	1,067 88	.....	1,413 77	153 00	.....	2,634 65	2,100 00
21 Burlington	524 38	524 38	1,368 96	367 50	.....	2,785 22	2,220 00
22 Cannington	497 79	597 79	885 48	542 75	23 00	2,546 81	1,890 00
23 Cardinal	436 85	586 85	691 38	329 50	.....	2,044 58	1,633 75
24 Carp	1,219 33	969 33	600 00	433 50	1,748 12	4,970 28	3,070 00
25 Chapleau	503 12	.....	1,350 00	.....	715 44	2,568 56	1,440 00
26 Claremont	450 04	550 04	600 00	232 00	405 31	2,237 39	1,660 00
27 Clifford	506 03	656 03	759 93	368 00	20 85	2,310 84	1,716 00
28 Coldwater	353 06	538 06	1,200 00	250 00	135 22	2,476 34	1,750 00
29 Comber	415 87	999 67	400 00	170 00	222 59	2,208 13	1,520 00
30 Cookstown	486 09	486 09	3,527 66	343 20	409 60	5,252 64	1,760 00
31 Creemore	329 92	329 92	582 86	236 00	.....	1,478 70	1,220 00
32 Delhi	108 24	208 24	130 87	20 00	.....	467 35	400 00
33 Drayton	647 41	708 49	1,244 51	689 35	67 00	3,356 76	2,750 00
34 Dresden	545 32	545 32	1,196 17	184 12	40 00	2,510 93	2,150 00
35 Drumbo	331 73	481 13	1,000 00	86 00	387 95	2,286 81	1,400 00
36 Dryden	508 16	.....	986 16	23 00	.....	1,517 32	1,170 00
37 Eganville	275 00	275 00	754 86	17 50	.....	1,322 36	1,105 00
38 Eganville(R.C.S.S)	418 65	418 20	561 52	139 00	501 03	2,038 40	1,500 00
39 Elmira	251 90	251 90	11,750 12	260 20	.....	12,514 12	1,251 00
40 Elmvale	511 75	511 75	1,117 51	98 50	40 00	2,279 51	2,000 00
41 Ennismore	458 23	458 23	593 54	600 00	.....	2,110 00	1,650 00
42 Erin	359 94	509 94	604 04	205 00	116 92	1,795 84	1,542 00
43 Exeter	643 00	1,286 00	4,600 00	696 75	416 87	7,642 62	3,125 00
44 Fenelon Falls	507 40	507 40	1,456 40	112 00	26 00	2,609 20	2,020 00
45 Feversham	223 29	.....	300 00	62 00	265 11	850 40	790 00
46 Finch	448 39	672 58	502 53	434 50	36 94	2,094 94	1,671 00

SCHOOLS
CIAL STATEMENT

penditure

	Buildings, Sites and all permanent improvements	Repairs to school accommodations	Library, scientific apparatus, maps, etc., typewriters, drawing models and equipment for physical culture	School books, stationery, fuel, examinations and other expenses	Total Expenditure	Balances	Charges per year for Tuition
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
1	.....	.....	12 00	273 00	2,295 00	213 13	Res. $5; non-res. $7.
2	194 76	.....	312 89	283 85	1,191 50	172 35	$10.
3	140 00	.....	25 00	544 56	2,719 56	.....	Res. F. I free; all others $10.
4	.....	.....	13 35	70 05	923 40	619 62	$10.
5	.....	.....	182 70	289 90	2,157 60	623 51	$10.
6	11 95	.....	162 38	139 24	2,012 37	57 87	Free.
7	25 00	18 00	39 20	195 00	1,457 20	164 24	Res. free; non-res. $10.
8	22 30	8 11	57 54	414 95	2,452 90	.....	$10.
9	.....	47 43	12 27	361 33	2,396 03	329 99	Res. F. I free; all others $10.
10	2,892 76	42 50	130 00	248 72	5,023 98	378 65	Res. F. I free: all others $10.
11	821 37	50 00	105 74	410 14	3,287 25	.....	Res. free; non-res. $10.
12	.....	75 00	.....	.....	1,000 00	.....	Res. 1st yr. free, other yrs. $20; non-res., 1st yr. $10, other yrs. $30.
13	.....	21 04	.....	288 55	1,734 59	23 98	$7.50.
14	.....	14 75	41 04	326 83	2,057 62	21 73	Res. free: non-res. $10.
15	14 22	.....	37 09	120 20	971 51	15 90	$5.
16	264 41	.....	93 80	378 00	4,279 06	.....	Res. $2.50, $7.50, $10, $15; non-res. $10, $12.50, $15, $20
17	.....	198 26	78 72	286 98	2,533 96	.....	Free.
18	105 00	49 55	59 47	362 61	2,406 63	15 56	Free.
19	.....	16 00	.....	348 86	2,349 86	745 94	Res. F. I $5, II, $7.50, III, $10; non-res. $10.
20	90 00	80 00	126 00	238 65	2,634 65	.....	$5.
21	67 08	25 58	72 00	400 56	2,785 22	.....	$10.
22	70 00	65 00	101 59	420 22	2,546 81	.....	$10.
23	175 00	.....	.....	235 83	2,044 58	.....	$10.
24	.....	.....	.....	651 87	3,721 87	1,248 41	Res. $5; non-res. $10.
25	250 00	5 85	.....	673 56	2,369 41	199 15	Free.
26	19 45	.....	46 60	157 61	1,883 66	353 73	Res. F. I free; all others $10.
27	.....	43 25	148 09	403 50	2,310 84	.....	$10.
28	205 00	34 00	73 59	396 33	2,458 92	17 42	$10.
29	6 55	.....	.....	232 95	1,759 50	448 63	$10.
30	32 85	43 80	13 25	3,276 00	5,125 90	126 74	$7.50.
31	.....	.....	69 70	189 00	1,478 70	.....	$10.
32	.....	21 17	3 53	42 65	467 35	.....	Res. free; non-res. $10.
33	13 20	.....	35 52	558 04	3,356 76	.....	Res. F. I free. II, $9, III, $11.50; non-res. $13.50.
34	.....	37 23	.....	323 70	2,510 93	.....	Res. L. Sch. free. M. $5; non-res. L. $6, M. $10.
35	.....	.....	73 18	207 56	1,680 74	606 07	$5.
36	106 05	.....	134 66	106 61	1,517 32	.....	Res. free; non-res. $10.
37	.....	17 01	17 18	183 17	1,322 36	.....	Res. free; non-res. $10.
38	.....	184 68	37 16	218 56	1,940 40	98 00	Res. free; non-res. $10.
39	10,754 95	.....	216 99	291 18	12,514 12	.....	Res. F. I free; all others $10.
40	.....	16 20	98 16	165 15	2,279 51	.....	Res. F. I free, III, $10; all others $5.
41	400 00	.....	20 00	40 00	2,110 00	.....	$20.
42	.....	13 92	90 77	149 15	1,795 84	.....	F. I res. free, non-res. $5; all others $9.
43	3,542 20	.....	80 00	487 50	7,234 70	407 92	Res. F. I free; all others $10
44	.....	95 00	251 78	242 42	2,609 20	.....	Res. free; non-res. $10.
45	.....	.....	.....	45 78	835 78	14 62	$10.
46	73 24	.....	35 58	262 17	2,041 99	52 95	$10.

CONTINUATION

I. TABLE H—FINAN-

Continuation Schools.—Con.	Receipts						Ex-
	Legislative Grants	Municipal Grants (county)	Municipal Grants (local)	School Fees	Balances and other sources	Total Receipts	Teachers' Salaries
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
47 Fingal	485 00	1,212 50	500 00	76 85	194 00	2,468 35	1,815 00
48 Fitzroy Harbour	432 53	432 53	800 00	164 00	153 42	1,982 48	1,720 00
49 Fort Frances	1,068 22	.....	2,271 30	.....	.....	3,339 52	2,240 00
50 Frankford	162 22	299 92	976 05	.....	54 43	1,492 62	471 50
51 Gore Bay	999 18	.....	1,086 45	530 18	.....	2,615 81	2,000 00
52 Grand Valley	502 34	502 34	614 59	383 20	33 00	2,035 47	1,570 00
53 Hanover	520 07	780 08	1,200 00	156 00	305 14	2,961 29	2,246 00
54 Harrow	238 73	809 68	3,676 59	49 00	.....	4,774 00	1,160 00
55 Havelock	511 92	511 92	829 87	92 00	32 00	1,977 71	1,890 00
56 Highgate	518 18	518 18	701 13	323 50	1,494 03	3,555 02	2,100 00
57 Huntsville	1,152 86	.....	1,391 32	235 25	328 00	3,107 43	2,300 00
58 Jarvis	269 52	469 52	477 46	127 50	.....	1,344 00	1,200 00
59 Jockvale	217 72	217 72	510 27	44 00	204 07	1,193 78	812 00
60 Kars	423 97	423 97	865 23	.....	.....	1,713 17	1,503 85
61 Keewatin	1,072 22	.....	2,030 72	.....	.....	3,102 94	2,420 00
62 Kenmore	451 59	451 59	758 61	467 50	361 50	2,490 79	1,590 00
63 Lakefield	529 45	529 45	1,502 75	.....	289 45	2,851 10	2,150 00
64 Lanark	462 07	462 07	800 00	257 00	920 15	2,901 29	1,650 00
65 Lansdowne	199 15	349 15	1,172 22	2 00	.....	1,722 52	775 00
66 Little Current	506 90	.....	773 10	25 00	.....	1,305 00	1,100 00
67 Lucknow	538 48	1,076 96	810 00	480 00	37 62	2,943 06	2,200 00
68 Malakoff	267 66	592 66	495 00	39 00	192 50	1,586 82	1,150 04
69 Manitowaning	444 86	.....	447 42	124 00	17 30	1,033 58	850 00
70 Manotick	217 82	217 82	520 03	29 10	37 55	1,022 32	800 00
71 Maxville	444 60	666 90	603 76	338 50	216 21	2,269 97	1,645 67
72 Melbourne	451 99	451 99	805 00	317 00	627 28	2,653 26	1,696 97
73 Merlin	458 23	958 23	227 81	282 50	.....	1,926 77	1,700 00
74 Merrickville	434 75	584 75	1,201 94	94 00	198 00	2,513 44	1,640 00
75 Metcalfe	441 15	441 15	534 00	258 00	117 00	1,791 30	1,596 75
76 Millbrook	494 80	844 80	400 00	.....	242 85	1,982 45	1,550 00
77 Milton	541 59	541 59	1,070 00	544 50	182 57	2,880 25	2,300 00
78 Mount Albert	471 64	471 64	500 00	304 00	302 28	2,049 56	1,700 00
79 New Hamburg	539 15	539 15	1,325 45	84 25	112 00	2,600 00	2,175 00
80 New Liskeard	1,696 44	.....	1,775 16	.....	1,106 75	4,578 35	3,123 15
81 North Augusta	452 62	602 62	500 00	246 00	116 94	1,918 18	1,645 00
82 North Gower	437 57	437 57	1,000 00	81 37	138 70	2,095 21	1,571 68
83 Norwich	475 91	625 00	1,201 00	267 00	62 30	2,631 21	1,790 00
84 Odessa	480 67	630 67	750 00	125 00	1,583 74	3,570 08	1,720 00
85 Oil Springs	521 06	771 06	712 84	214 50	.....	2,219 46	1,900 00
86 Orono	428 25	728 25	884 60	.....	1,567 42	3,608 52	1,685 00
87 Paisley	497 04	1,580 50	5,500 00	477 75	.....	8,055 29	1,860 00
88 Pakenham	521 63	521 63	1,400 00	586 00	1,907 42	4,936 68	2,720 00
89 Palmerston	534 95	693 95	1,209 29	84 00	10 50	2,532 69	2,035 00
90 Plattsville	475 12	775 12	500 00	300 00	143 21	2,193 45	1,792 00
91 Port Burwell	485 18	1,212 95	400 00	.....	724 18	2,822 31	1,900 00
92 Port Colborne	554 33	654 33	1,000 00	.....	1,800 73	4,009 39	2,160 00
93 Powassan	472 90	.....	500 00	178 50	299 02	1,450 42	1,000 00
94 Princeton	352 19	652 19	882 75	34 00	1,224 88	3,146 01	1,850 00

SCHOOLS—Continued

CIAL STATEMENT—Continued

penditure

	Buildings, Sites and all permanent improvements	Repairs to school accommodations	Library, scientific apparatus, maps, etc., typewriters, drawing models and equipment for physical culture	School books, stationery, fuel, examinations and other expenses	Total Expenditure	Balances	Charges per year for Tuition
	$ c.	$ c.	c.		$ c.	$ c.	
47	82 04	18 52	7 20	314 99	2,237 75	230 60	Res. free; non-res. $10.
48	21 22	.....	25 73	139 63	1,906 58	75 90	$10.
49	.....	62 83	357 40	321 03	2,981 26	358 26	Free.
50	163 00	.....	110 00	300 00	1,044 50	448 12	Free.
51	.....	.....	356 25	259 56	2,615 81	.....	$10.
52	38 75	25 30	97 66	303 76	2,035 47	.....	Res. F. I free; all others $10.
53	17 50	96 25	43 51	379 30	2,782 56	178 73	Res. F. I free; all others $10.
54	3,425 00	.....	.....	189 00	4,774 00	.....	Res. free; non-res. $10.
55	.....	.....	36 01	51 70	1,977 71	.....	Res. $3; non-res. $6.
56	76 38	.....	92 65	759 47	3,028 50	526 52	Res. F. I free, II & III, $7.50; non-res. I $5, II & III, $10.
57	364 71	.....	70 00	235 00	2,969 71	137 72	Res. L. Sch. free, M. $10; non-res. L. $7.50, M. $10.
58	.....	.....	.....	144 00	1,344 00	.....	Res. free; non-res. $7.50.
59	.....	4 51	45 90	330 97	1,193 38	.40	Res. F. I free; all others $5.
60	5 30	.....	.....	204 02	1,713 17	.....	Free.
61	30 89	84 78	.....	567 27	3,102 94	.....	Free.
62	390 00	.....	45 19	465 60	2,490 79	.....	$12.50
63	.....	15 00	21 50	664 60	2,851 10	.....	Free.
64	.....	.....	.....	292 60	1,942 60	958 69	Res. free; non-res. $10.
65	33 00	.....	127 45	114 43	1,049 88	672 64	Res. free; non-res. $5.
66	.....	.....	100 00	105 00	1,305 00	.....	Res. free; non-res. $10.
67	60 00	75 00	85 00	360 00	2,780 00	163 06	Res. $5; non-res. $10.
68	105 48	190 00	16 30	120 13	1,581 95	4 87	Res. free; non-res. $10.
69	20 35	.....	55 71	80 12	1,006 18	27 40	$10.
70	50 00	.....	70	114 30	965 00	57 32	Res. free; non-res. $5.
71	.....	.....	92 37	315 72	2,053 76	216 21	Res. $5; non-res. $10.
72	16 00	2 15	144 90	712 87	2,572 89	80 37	Res. free; non-res. $10.
73	.....	.....	36 76	190 01	1,926 77	.....	$10.
74	133 06	100 00	71 12	341 20	2,285 38	228 06	Res. free; non-res. $5.
75	.....	11 75	35 04	142 65	1,786 19	5 11	$10.
76	9 44	.....	15 65	216 30	1,791 39	191 06	Free.
77	143 91	.....	4 60	302 62	2,751 13	129 12	$7.50.
78	36 32	.....	15 15	173 03	1,924 50	125 06	$10.
79	.....	.....	100 00	325 00	2,600 00	.....	Res. free; non-res. L. Sch. $7.50, M. 10.
80	.....	9 95	83 72	967 12	4,183 94	394 41	Free.
81	.....	.....	.....	228 15	1,873 15	45 03	Res. 1st yr. free; all others $10.
82	.....	.....	.....	346 17	1,917 85	177 36	Res. free; non-res. $7.50.
83	85 00	50 00	75 60	574 48	2,575 08	56 13	Res. $3; non-res. $6.
84	24 96	72 33	73 28	454 06	2,344 63	1,225 45	Res. free; non-res. $10.
85	.....	.....	.....	319 46	2,219 46	.....	Res. $5; non-res. $10.
86	238 06	.....	62 86	551 72	2,537 64	1,070 88	Free.
87	1,008 10	.....	357 33	299 46	3,524 89	4,530 40	L. Sch. res. $5; non-res. $10; M. $12.50.
88	75 45	9 75	.....	340 79	3,145 99	1,790 69	$10.
89	63 14	45 55	36 00	353 00	2,532 69	.....	Res. free; non-res. $5.
90	.....	.....	175 89	214 34	2,182 23	11 22	Res. $6; non-res. $12.
91	29 80	.....	32 62	129 23	2,091 65	730 66	Free.
92	.....	32 65	92 71	400 10	2,685 46	1,323 93	Free.
93	117 00	.....	.....	100 00	1,217 00	233 42	Res. $10; non-res. $15.
94	.....	.....	44 00	199 81	2,093 81	1,052 20	Res. free; non-res. $4.50.

CONTINUATION

I. TABLE H—FINAN-

Continuation Schools —concluded	Receipts						Ex-
	Legislative Grants	Municipal Grants (county)	Municipal Grants (local)	School Fees	Balances and other sources	Total Receipts	Teachers' Salaries
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
95 Richard's Lnd'g.	433 50	.....	600 00	37 50	691 52	1,762 52	780 50
96 Richmond	252 34	252 34	607 69	208 25	.....	1,320 62	1,000 00
97 Ridgeway	507 60	607 60	1,409 80	.....	.....	2,525 00	2,430 00
98 Ripley	454 11	1,443 25	2,966 00	634 00	454 44	5,951 80	1,790 00
99 Rodney	472 61	1,181 52	408 17	20 00	23 85	2,106 15	1,742 80
100 Russell	270 86	970 86	733 33	170 00	698 70	2,843 75	1,260 00
101 St. George	528 05	678 05	1,027 72	65 00	22 61	2,321 43	2,000 00
102 Schomberg	210 39	210 39	300 00	109 50	106 68	936 96	825 00
103 Southampton	541 49	1,082 98	772 33	257 70	42 60	2,697 10	1,950 00
104 Spencerville	348 29	498 29	300 00	210 00	864 95	2,221 53	1,350 00
105 Springfield	370 75	926 87	1,002 52	103 20	944 14	3,347 48	1,690 00
106 Stayner	512 25	512 25	1,000 00	338 50	289 11	2,652 11	2,100 00
107 Stella	205 04	355 04	150 00	270 00	59 98	1,040 06	800 00
108 Stouffville	498 77	498 77	367 98	689 25	14 00	2,068 77	1,860 00
109 Sturgeon Falls	567 38	.....	1,245 07	114 30	259 70	2,186 45	1,000 00
110 Sutton	325 01	325 01	1,240 00	295 50	260 97	2,446 49	1,390 00
111 Tamworth	479 55	629 55	878 63	255 25	.....	2,242 98	1,717 18
112 Tara	521 69	1,043 38	452 84	536 00	53 48	2,607 39	2,000 00
113 Tavistock	492 57	642 57	918 25	225 50	120 00	2,398 89	1,985 00
114 Teeswater	443 80	887 60	600 00	409 50	499 94	2,840 84	1,800 00
115 Thamesville	480 90	480 90	682 00	159 30	41 00	1,844 10	1,500 00
116 Thessalon	970 20	.....	1,191 38	.....	.....	2,161 58	1,870 00
117 Thornbury	468 57	702 85	8,869 11	304 00	.....	10,344 53	1,824 80
118 Thorndale	477 59	.....	1,403 41	365 00	614 09	2,860 09	1,830 00
119 Tilbury	499 06	449 06	850 00	187 00	358 23	2,343 35	1,650 00
120 Tottenham	477 18	477 18	772 94	442 50	.....	2,169 80	1,775 00
121 Tweed	507 32	807 32	708 12	275 00	24 43	2,322 19	1,900 00
122 Wallaceburg	555 16	555 16	2,000 00	149 00	384 17	3,643 49	3,120 00
123 Warkworth	530 55	930 55	1,406 25	511 00	127 00	3,505 35	1,980 00
124 Webbwood	515 86	.....	743 71	.....	.....	1,259 57	1,000 00
125 West Lorne	257 33	643 32	300 00	.....	230 08	1,430 73	952 00
126 Westmeath	264 06	264 06	675 47	60 00	.....	1,263 59	1,140 00
127 Westport	361 13	480 67	805 09	52 90	43 00	1,742 79	1,575 00
128 Westport(R.C.S.S)	189 59	197 29	350 00	36 00	312 89	1,085 77	600 00
129 Wheatley	484 84	484 84	663 08	460 00	.....	2,092 76	1,850 00
130 Winona	236 64	473 28	453 70	.....	5 57	1,169 19	900 00
131 Wolfe Island	178 93	178 93	400 00	221 50	570 19	1,549 55	737 98
132 Wroxeter	447 43	894 86	504 79	247 00	.....	2,094 08	1,500 00
1 Totals, 1915	63,529 40	68,445 34	149,723 68	28,248 97	34,950 95	344,898 34	219,660 27
2 Totals, 1914	69,811 42	70,197 74	120,196 11	24,922 50	40,775 40	325,903 17	208,385 64
3 Increases	.....	.....	29,527 57	3,326 47	.....	18,995 17	11,274 63
4 Decreases	6,282 02	1,752 40	.....	.....	5,824 45	.....	.....
5 Percentages	18.42	19.84	43.41	8.19	10.13	.....	70.67

Cost per pupil, enrolled attendance, $45.70; average attendance, $72.71.

SCHOOLS—Continued

CIAL STATEMENT—Concluded

penditure							
	Buildings, Sites and all permanent improvements	Repairs to school accommodations	Library, scientific apparatus, maps, etc., typewriters, drawing models and equipment for physical culture	School books, stationery, fuel, examinations and other expenses	Total Expenditure	Balances	Charges per year for Tuition
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
95	5 60	.....	39 14	127 98	953 22	809 30	Res. $5; non-res. $10.
96	125 95	.....	.....	194 67	1,320 62	.....	Res. $5; non-res. $10.
97	.....	.....	15 00	80 00	2,525 00	.....	Free.
98	.....	5 25	251 49	447 90	2,494 64	3,457 16	Res. $10; non-res. $8.
99	.....	.....	100 00	263 35	2,106 15	.....	Res. free; non-res. $10.
100	174 49	.....	.....	86 66	1,521 15	1,322 60	$10.
101	.....	.....	125 30	190 55	2,315 85	5 58	Res. free; non-res. $12.
102	.....	.....	.....	90 00	915 00	21 96	F. I res. free; non-res. $5; all others $10.
103	.....	.....	.....	680 39	2,630 39	66 71	$8.
104	230 55	.....	51 80	242 71	1,875 06	346 47	$10.
105	49 40	86 09	890 53	270 85	2,986 87	360 61	L. Sch. res. free; all others $10.
106	.....	30 37	69 66	320 99	2,521 02	131 09	Res. $5; non-res. $10.
107	.....	.....	65 29	140 63	1,005 92	34 14	$20.
108	.....	.....	8 90	199 87	2,068 77	.....	$15.
109	.....	43 87	.....	663 02	1,706 89	479 56	$10.
110	.....	150 00	50 00	244 58	1,834 58	611 91	$10.
111	.....	.....	12 80	396 74	2,126 72	116 26	Res. free: non-res. $10.
112	158 40	.....	82 55	366 44	2,607 39	.....	$10.
113	.....	.....	51 03	309 36	2,345 39	53 50	Res. $5; non-res. $10.
114	40 00	18 03	159 73	314 78	2,332 54	508 30	1st yr. $5; other yrs. $10.
115	63 32	.....	44 01	236 77	1,844 10	.....	Res. free: non-res. $10.
116	.....	.....	89 02	202 56	2,161 58	.....	Free
117	7,785 79	.....	109 00	624 94	10,344 53	.....	Res. $5; non-res. $10.
118	376 10	22 83	47 47	333 18	2,609 58	250 51	$10.
119	50 00	40 28	13 85	217 13	1,971 26	372 09	$10.
120	53 10	.....	6 00	306 08	2,140 18	29 62	Res. 1st. yr. free; all others $10.
121	76 00	.....	.....	239 97	2,215 97	106 22	Res. $5; non-res. $10.
122	.....	.....	.....	505 57	3,625 57	17 92	Res. free; non-res. $10.
123	420 26	.....	55 35	1,049 74	3,505 35	.....	Res. I $6, II, $9, III, $15; non-res. $7.50, $10.50, $15.
124	7 00	17 80	39 32	195 45	1,259 57	.....	Free.
125	67 32	.....	.....	207 89	1,227 21	203 52	Free.
126	.....	16 93	42 00	64 66	1,263 59	.....	Res. 1st yr. free; all others $10.
127	23 45	.....	38 41	105 93	1,742 79	.....	Res. free; non-res. $5.
128	.....	.....	25 00	100 00	725 00	360 77	Res. free; non-res. $5.
129	85 00	.....	91 01	66 75	2,092 76	.....	Res. $10; non-res. $20.
130	63 63	.....	119 99	85 57	1,169 19	.....	Free.
131	17 60	.....	10 21	758 57	1,524 36	25 19	$15.
132	68 71	60 90	.....	464 47	2,094 08	.....	F. I $5, II, $7.50, III, $10.
1	37,102 87	2,622 00	9,056 14	42,352 96	310,794 24	34,104 10	49 free; 83 not free.
2	33,050 74	2,225 86	10,846 17	39,616 32	294,124 73	31,778 44	49 free; 82 not free.
3	4,052 13	396 14	.....	2,736 64	16,669 51	2,325 66	.... 1 not free.
4	.....	.....	1,790 03	.....	.....	.....	.....
5	11.94	.84	2.91	13.63	.....	.....	37.12 free; 62.87 not free.

CONTINUATION

II. TABLE I—ATTENDANCE, PUPILS IN THE SCHOOLS AND

Continuation Schools	Pupils				Number of Pupils in—			Number of Pupils from—		
	Boys	Girls	Total number of Pupils	Average Daily Attendance	Lower School	Middle School	Upper School	Municipalities forming C.S. District or from School Section	Other Sections	No. of other Sections thus represented
1 Acton	28	48	76	46	55	21	.....	48	28	12
2 Agincourt	6	12	18	17	18	.....	.....	8	10	....
3*Alvinston	43	53	96	68	82	14	.....	37	59	13
4 Arkona	11	6	17	9	17	.....	.....	12	5	3
5 Ayr	20	21	41	27	28	13	.....	33	8	5
6 Bancroft	17	23	40	23	37	3	.....	26	14	11
7 Bath	17	20	37	18	26	11	.....	23	14	5
8 Beaverton	34	43	77	46	45	32	.....	70	7	2
9 Beeton	25	26	51	28	36	15	.....	26	25	5
10 Belmont	22	36	58	52	40	18	.....	40	18	8
11 Blenheim	40	41	81	50	62	19	.....	48	33	15
12 Blind River	7	16	23	9	23	.....	.....	23	.....	....
13 Blyth	10	29	39	25	21	18	.....	28	11	4
14 Bothwell	29	26	55	30	43	12	.....	29	26	14
15 Bowesville	9	10	19	10	19	.....	.....	4	15	3
16 Bracebridge	47	102	149	95	117	26	6	114	35	20
17 Bridgeburg	17	31	48	30	35	13	.....	39	9	2
18 Bruce Mines	10	19	29	19	21	8	.....	17	12	3
19 Brussels	35	48	83	55	57	26	.....	34	49	11
20 Burk's Falls	21	32	53	30	48	5	.....	44	9	4
21 Burlington	23	29	52	33	42	10	.....	37	15	3
22 Cannington	36	47	83	55	47	36	.....	24	59	15
23 Cardinal	29	29	58	30	41	17	.....	47	11	7
24 Carp	33	46	79	52	55	24	.....	34	45	12
25 Chapleau	16	14	30	19	28	2	.....	30	.....	....
26 Claremont	18	22	40	26	30	10	.....	24	16	9
27 Clifford	12	36	48	34	34	14	.....	30	18	7
28 Coldwater	16	21	37	28	25	12	.....	26	11	4
29 Comber	11	16	27	16	21	6	.....	22	5	3
30 Cookstown	32	29	61	38	45	16	.....	29	32	8
31 Creemore	13	15	28	19	21	7	.....	20	8	5
32 Delhi	7	12	19	16	19	.....	.....	14	5	2
33 Drayton	41	59	100	57	55	45	.....	40	60	26
34 Dresden	38	41	79	50	51	28	.....	45	34	12
35 Drumbo	8	14	22	14	15	7	.....	22	.....	....
36 Dryden	2	14	16	11	16	.....	.....	12	4	2
37 Eganville	13	14	27	15	24	3	.....	25	2	2
38 Eganville (R.C.S.S.)	32	48	80	54	53	27	.....	40	40	20
39 Elmira	28	26	54	29	46	8	.....	31	23	12
40 Elmvale	21	27	48	23	41	7	.....	18	30	6
41 Ennismore	18	29	47	29	33	14	.....	41	6	4
42 Erin	19	35	54	35	39	15	.....	34	20	7
43 Exeter	47	74	121	81	84	37	.....	59	62	21
44 Fenelon Falls	19	34	53	37	40	13	.....	42	11	6
45 Feversham	3	11	14	5	14	.....	.....	4	10	7
46 Finch	29	42	71	40	52	19	.....	30	41	12
47 Fingal	21	16	37	26	19	18	.....	26	11	4
48 Fitzroy Harbour	14	15	29	16	19	10	.....	13	16	8
49 Fort Frances	15	27	42	24	36	6	.....	31	11	10
50 Frankford	15	21	36	23	31	5	.....	16	20	4
51 Gore Bay	29	45	74	49	61	13	.....	42	32	13
52 Grand Valley	38	42	80	54	54	26	.....	58	22	9

* School opened in September.

SCHOOLS—Continued

IN THE VARIOUS SUBJECTS, ETC.

	Number of Pupils from Families whose Head is occupied as below—								Number of Pupils in the Various Subjects									
	Commerce	Agriculture	Law, Medicine or the Church	Teaching	The Trades	Labouring occupations	Other occupations	Without occupation	English Grammar	English Composition and Rhetoric	English Literature	Canadian History	British History	Ancient History	Geography	Reading	Arithmetic and Mensuration	Algebra
1	9	31	3	1	15	3	8	6	55	76	76	76	76	21	55	55	55	76
2	....	15	1	....	....	....	2	....	18	18	18	18	18	....	18	18	18	18
3	18	35	1	....	8	14	20	....	82	96	96	96	96	14	82	82	82	96
4	3	9	2	....	2	1	....	....	17	17	17	17	17	....	17	17	17	17
5	5	21	....	....	11	4	....	....	28	41	41	41	27	13	29	33	33	41
6	11	14	....	2	3	3	4	3	37	40	40	40	23	3	37	37	37	40
7	11	16	3	....	2	2	3	....	26	37	37	37	37	11	26	26	26	37
8	8	40	2	....	8	7	12	....	60	77	77	77	77	28	60	60	60	77
9	5	30	2	....	3	4	2	5	36	51	51	51	51	15	36	36	36	51
10	3	50	1	....	....	1	3	....	40	58	58	58	37	18	40	40	40	58
11	10	47	7	....	11	6	....	....	38	51	51	51	32	13	38	38	38	51
12	4	.....	....	....	3	2	14	....	23	23	23	23	23	....	23	23	23	23
13	2	18	2	....	10	5	2	....	21	26	26	26	16	7	19	19	19	26
14	3	19	1	....	8	9	12	3	43	55	55	43	47	12	43	43	43	55
15	....	19	....	....	....	....	....	....	11	11	11	11	9	....	11	11	11	11
16	33	45	5	1	40	4	21	....	117	143	143	143	81	26	117	117	117	143
17	8	3	....	....	20	3	13	1	35	48	48	48	48	13	35	35	35	48
18	5	18	....	....	....	....	6	....	21	29	29	29	29	8	21	21	21	29
19	15	31	6	....	8	14	3	6	67	83	81	81	81	26	66	66	66	80
20	4	14	4	1	9	6	15	....	35	40	40	40	20	5	35	35	35	40
21	3	16	4	....	2	4	23	....	42	52	52	52	52	10	42	42	42	52
22	15	39	3	2	11	4	7	2	47	83	83	83	60	36	47	47	47	83
23	3	17	2	....	12	14	8	2	41	58	58	58	58	17	41	41	41	58
24	9	60	3	....	2	2	3	....	55	79	79	79	60	24	55	19	55	79
25	7	.....	1	....	21	....	1	....	28	30	30	27	12	2	28	28	28	28
26	2	22	5	....	5	3	3	....	30	40	40	40	31	10	30	30	30	40
27	6	18	5	....	8	4	7	....	39	48	48	48	41	14	39	39	39	48
28	10	10	....	1	....	10	6	....	30	37	37	37	37	12	30	30	30	37
29	6	13	....	....	....	4	4	....	21	27	27	27	18	6	21	21	21	27
30	4	43	....	....	7	3	4	....	45	61	61	61	61	16	45	45	45	61
31	4	11	2	....	6	2	2	1	21	28	28	28	28	7	21	21	21	28
32	7	7	....	....	3	1	1	....	19	19	19	19	7	....	19	19	19	19
33	2	73	3	....	3	8	2	9	55	100	100	100	100	45	55	55	55	100
34	12	39	7	....	13	4	4	....	53	79	79	79	79	26	53	53	53	79
35	.....	8	2	....	7	5	....	....	15	22	22	22	14	7	15	15	15	22
36	1	4	....	....	3	8	....	....	16	16	16	16	11	....	16	16	16	16
37	5	6	1	....	10	2	3	....	24	27	27	27	18	3	24	24	24	27
38	17	36	2	....	9	4	12	....	53	80	80	80	80	27	53	53	53	80
39	1	19	1	....	19	10	1	3	46	54	54	54	54	8	46	46	46	54
40	.....	33	1	1	13	....	....	....	41	48	48	41	36	7	41	41	41	48
41	.....	47	....	....	....	....	....	....	26	31	31	31	31	5	26	26	26	31
42	17	30	3	....	....	2	2	....	39	54	54	31	54	15	39	39	40	54
43	18	58	2	1	13	14	7	8	77	121	121	121	121	37	77	84	84	114
44	5	21	1	....	11	15	....	....	34	47	47	47	47	13	34	34	34	47
45	.....	11	....	....	....	1	2	....	14	14	14	14	5	....	14	14	14	14
46	2	49	2	....	15	....	3	....	52	71	71	52	42	19	52	52	52	71
47	1	22	4	....	3	6	....	1	29	37	37	37	37	18	19	19	20	37
48	.....	20	1	....	4	....	2	2	22	29	29	29	29	10	22	22	22	28
49	6	10	3	....	5	4	11	3	36	42	42	42	42	6	36	36	36	42
50	4	20	1	1	4	2	4	....	31	36	36	20	21	5	31	31	31	36
51	1	30	7	1	18	7	9	1	68	74	74	74	44	13	68	74	68	74
52	22	37	5	....	3	6	2	5	54	80	80	80	80	26	55	54	54	80

CONTINUATION

II. TABLE I—ATTENDANCE, PUPILS IN THE SCHOOLS

Continuation Schools*	Number of Pupils in the Various Subjects						
	Geometry	French	German	Latin	Zoology	Botany	Chemistry
1 Acton	45	56	.....	62	55	55	45
2 Agincourt	6	18	.....	18	18	18	6
3 Alvinston	46	30	.....	60	82	82	46
4 Arkona	12	10	.....	13	17	17	12
5 Ayr	27	25	.....	32	30	30	26
6 Bancroft	40	26	.....	30	37	37	23
7 Bath	37	18	.....	18	25	25	26
8 Beaverton	56	49	.....	48	60	60	55
9 Beeton	33	50	.....	50	36	36	51
10 Belmont	37	52	.....	56	40	40	37
11 Blenheim	51	43	.....	47	38	38	51
12 Blind River	10	23	.....	23	23	23	10
13 Blyth	16	19	4	23	19	19	16
14 Bothwell	38	51	.....	52	43	43	38
15 Bowesville	9	8	.....	8	11	11	9
16 Bracebridge	81	45	6	98	123	123	81
17 Bridgeburg	37	48	.....	48	35	35	48
18 Bruce Mines	29	26	.....	28	21	21	24
19 Brussels	66	39	.....	49	66	66	26
20 Burk's Falls	20	38	.....	38	35	35	20
21 Burlington	29	49	.....	50	42	42	29
22 Cannington	60	26	.....	52	47	47	60
23 Cardinal	32	43	.....	41	41	41	32
24 Carp	60	72	.....	76	55	55	60
25 Chapleau	10	27	.....	24	30	30	2
26 Claremont	40	40	.....	37	30	30	16
27 Clifford	41	7	21	44	39	39	14
28 Coldwater	24	35	1	36	30	30	37
29 Comber	18	22	.....	22	21	21	14
30 Cookstown	32	60	.....	61	45	45	32
31 Creemore	15	20	.....	20	21	21	15
32 Delhi	19	7	.....	19	19	19	7
33 Drayton	48	80	.....	95	55	55	68
34 Dresden	51	45	.....	77	53	53	51
35 Drumbo	14	15	.....	18	15	15	14
36 Dryden	11	11	.....	16	16	16	11
37 Eganville	21	9	.....	9	24	24	21
38 Eganville (R.C.S.S.)	59	29	.....	29	33	33	65
39 Elmira	29	.....	.....	.....	46	46	28
40 Elmvale	36	48	.....	46	41	41	27
41 Ennismore	22	27	.....	28	26	26	22
42 Erin	41	31	.....	48	39	39	41
43 Exeter	79	59	3	78	68	68	80
44 Fenelon Falls	28	32	.....	36	34	34	13
45 Feversham	5	.....	.....	14	14	14	5
46 Finch	42	65	.....	65	52	52	42
47 Fingal	31	13	.....	22	19	19	31
48 Fitzroy Harbour	22	20	.....	20	22	22	10
49 Fort Frances	17	38	.....	39	36	36	13
50 Frankford	21	36	.....	36	31	31	21
51 Gore Bay	44	70	.....	69	68	68	44
52 Grand Valley	80	70	.....	80	54	54	31

SCHOOLS—Continued

AND IN THE VARIOUS SUBJECTS, ETC.—Continued

	Number of Pupils in the Various Subjects—Continued							Special Courses		
	Physics	Writing	Bookkeeping	Stenography	Typewriting	Art	Physical Culture	Commercial	Agriculture	Art (Middle School)
1	76	55	.....	.....	.....	55	76	.....	.....	.....
2	18	18	.....	.....	.....	18	18	.....	18	.....
3	96	82	.....	.....	.....	82	96	.....	.....	.....
4	17	17	.....	.....	.....	17	17	.....	.....	.....
5	37	28	28	.....	.....	23	41	.....	.....	.....
6	40	17	20	.....	.....	37	37	.....	.....	.....
7	37	26	.....	.....	.....	36	37	.....	.....	.....
8	77	60	.....	.....	.....	60	77	.....	.....	1
9	33	36	.....	.....	.....	36	51	.....	.....	.....
10	58	40	.....	.....	.....	40	58	.....	.....	.....
11	51	38	.....	.....	.....	38	51	.....	.....	2
12	23	23	23	.....	.....	23	21	.....	.....	.....
13	26	10	.....	.....	.....	21	.....	.....	.....	.....
14	38	43	.....	.....	.....	43	55	.....	.....	.....
15	11	11	9	.....	.....	11	11	.....	.....	.....
16	143	62	48	.....	.....	122	117	.....	.....	5
17	48	35	.....	.....	.....	35	48	.....	.....	.....
18	29	21	.....	.....	.....	21	29	.....	.....	.....
19	81	67	.....	.....	.....	66	83	.....	.....	.....
20	53	35	35	.....	.....	35	40	.....	.....	.....
21	52	42	.....	.....	.....	42	50	.....	.....	.....
22	83	47	.....	.....	.....	47	83	.....	15	.....
23	58	31	.....	.....	.....	33	58	.....	.....	2
24	79	19	.....	.....	.....	55	79	.....	.....	.....
25	30	28	.....	.....	.....	28	30	.....	.....	.....
26	40	30	.....	.....	.....	30	40	.....	.....	.....
27	48	7	.....	.....	.....	39	48	.....	.....	.....
28	37	30	30	.....	.....	30	37	.....	.....	.....
29	27	21	.....	.....	.....	21	27	.....	.....	.....
30	61	45	.....	.....	.....	45	61	.....	.....	.....
31	28	21	.....	.....	.....	21	.....	.....	.....	.....
32	19	19	19	.....	.....	19	19	.....	.....	.....
33	100	55	32	.....	.....	55	100	.....	55	.....
34	79	79	.....	.....	.....	53	79	.....	.....	.....
35	22	15	.....	.....	.....	15	22	.....	.....	.....
36	16	16	11	.....	.....	16	16	.....	.....	.....
37	27	24	9	.....	.....	24	27	.....	.....	.....
38	80	20	.....	.....	.....	49	80	.....	.....	17
39	20	46	.....	.....	.....	46	54	.....	.....	.....
40	48	41	.....	.....	.....	41	48	.....	.....	.....
41	31	26	26	.....	.....	26	.....	.....	.....	.....
42	54	41	.....	.....	.....	40	54	.....	.....	.....
43	104	84	84	17	19	67	121	17	70	.....
44	47	34	34	.....	.....	34	47	.....	.....	.....
45	14	14	7	.....	.....	14	.....	.....	.....	.....
46	71	29	.....	.....	.....	52	71	.....	.....	.....
47	37	19	.....	.....	.....	19	37	.....	.....	.....
48	29	22	2	.....	.....	22	29	.....	.....	.....
49	42	36	36	.....	.....	36	42	.....	.....	.....
50	36	31	.....	.....	.....	36	36	.....	.....	5
51	74	.....	68	.....	.....	69	74	.....	.....	.....
52	79	54	54	.....	.....	54	80	.....	.....	.....

CONTINUATION

II. TABLE I—ATTENDANCE, PUPILS IN THE SCHOOLS

Continuation Schools (Continued)	Pupils				Number of Pupils in—			Number of Pupils from—		
	Boys	Girls	Total number of Pupils	Average Daily Attendance	Lower School	Middle School	Upper School	Municipalities forming C. S. District or from School Section	Other Sections	No. of other Sections thus represented.
53 Hanover	33	44	77	46	61	16	.....	68	9	6
54 Harrow	11	19	30	17	23	7	.....	19	11	7
55 Havelock	18	31	49	31	33	16	.....	42	7	5
56 Highgate	26	41	67	42	49	18	.....	31	36	12
57 Huntsville	25	45	70	52	50	20	.....	55	15	5
58 Jarvis	16	23	39	21	39	.....	.....	14	25	9
59 Jockvale	14	11	25	12	25	.....	.....	19	6	5
60 Kars	10	13	23	15	14	9	.....	16	7	3
61 Keewatin	20	19	39	23	27	12	.....	39	.....	....
62 Kenmore	20	33	53	35	35	18	.....	23	30	6
63 Lakefield	23	45	68	52	46	22	.....	50	18	6
64 Lanark	24	67	91	66	45	46	.....	42	49	14
65 Lansdowne	12	20	32	15	32	.....	.....	25	7	5
66 Little Current	10	18	28	20	28	.....	.....	20	8	4
67 Lucknow	40	51	91	60	55	36	.....	54	37	12
68 Malakoff	6	11	17	13	13	4	.....	11	6	1
69 Manitowaning	7	18	25	13	23	2	.....	11	14	4
70 Manotick	6	12	18	10	18	.....	.....	5	13	9
71 Maxville	22	43	65	40	55	10	.....	31	34	12
72 Melbourne	28	31	59	41	38	21	.....	16	43	12
73 Merlin	22	18	40	24	27	13	.....	21	19	6
74 Merrickville	20	34	54	35	40	14	.....	36	18	4
75 Metcalfe	14	34	48	28	37	11	.....	23	25	7
76 Millbrook	16	37	53	36	35	18	.....	27	26	12
77 Milton	41	60	101	66	77	24	.....	55	46	10
78 Mount Albert	25	24	49	32	39	10	.....	29	20	9
79 New Hamburg	20	30	50	33	31	19	.....	36	14	5
80 New Liskeard	21	29	50	29	35	15	.....	40	10	10
81 North Augusta	21	22	43	27	30	13	.....	18	25	11
82 North Gower	15	15	30	19	16	14	.....	13	17	7
83 Norwich	38	41	79	48	54	25	.....	32	47	15
84 Odessa	22	20	42	17	32	10	.....	21	21	8
85 Oil Springs	19	28	47	30	29	18	.....	33	14	8
86 Orono	15	41	56	36	32	24	.....	30	26	8
87 Paisley	26	46	72	49	44	28	.....	34	38	15
88 Pakenham	41	40	81	55	53	21	7	31	50	12
89 Palmerston	38	43	81	45	56	25	.....	47	34	13
90 Plattsville	24	23	47	31	37	10	.....	25	22	10
91 Port Burwell	11	24	35	18	29	6	.....	29	6	5
92 Port Colborne	23	26	49	24	49	.....	.....	42	7	4
93 Powassan	10	18	28	16	28	.....	.....	19	9	5
94 Princeton	14	24	38	25	26	12	.....	23	15	5
95 Richard's Landing	4	8	12	11	12	.....	.....	10	2	2
96 Richmond	17	30	47	29	26	21	.....	22	25	7
97 Ridgeway	24	24	48	31	26	22	.....	25	23	6
98 Ripley	40	50	90	63	61	29	.....	34	56	15
99 Rodney	25	36	61	38	46	15	.....	33	28	12
100 Russell	11	17	28	18	28	.....	.....	25	3	3
101 St. George	20	26	46	23	42	4	.....	39	7	4
102 Schomberg	13	19	32	17	32	.....	.....	17	15	6
103 Southampton	26	29	55	33	45	10	.....	49	6	4
104 Spencerville	15	18	33	19	25	8	.....	14	19	10

SCHOOLS—Continued

AND IN THE VARIOUS SUBJECTS, ETC.—Continued

	Number of Pupils from Families whose Head is occupied as below—							Number of Pupils in the Various Subjects										
	Commerce	Agriculture	Law, Medicine or the Church	Teaching	The Trades	Labouring occupations	Other occupations	Without occupation	English Grammar	English Composition and Rhetoric	English Literature	Canadian History	British History	Ancient History	Geography	Reading	Arithmetic and Mensuration	Algebra
53	18	11	6	....	24	5	8	5	59	75	75	75	48	16	59	59	61	77
54	5	17	1	....	2	2	3	....	23	30	30	30	19	7	23	23	23	30
55	5	11	2	....	....	25	5	1	23	30	30	30	19	9	22	23	23	30
56	5	57	2	1	2	....	....	....	49	49	49	67	67	18	49	49	49	67
57	12	10	5	1	17	15	4	6	50	70	70	70	70	20	50	50	50	70
58	3	28	1	....	2	3	1	1	39	39	39	39	23	....	39	39	39	39
59	....	24	....	....	1	....	....	....	25	25	25	25	19	....	25	25	25	25
60	1	18	1	....	3	....	....	....	14	23	23	23	19	9	14	14	14	23
61	....	2	....	....	20	17	....	....	31	39	39	39	27	12	31	31	31	39
62	....	42	1	....	4	3	3	....	39	53	53	39	36	18	39	39	39	53
63	16	23	....	....	14	12	3	....	44	68	68	68	68	24	44	44	44	68
64	9	51	3	....	12	3	10	3	45	91	91	91	91	46	45	45	45	91
65	1	14	1	....	13	1	2	....	32	32	32	32	15	....	32	32	32	32
66	1	9	2	....	2	14	....	....	28	28	28	11	17	....	28	28	28	28
67	20	41	4	....	15	5	....	6	67	91	91	91	91	36	67	91	67	91
68	....	17	....	....	....	....	....	....	11	13	13	13	9	2	11	11	11	13
69	4	16	1	....	2	....	2	....	23	25	25	25	12	2	23	23	23	25
70	1	13	1	....	1	2	....	....	18	17	18	18	14	....	18	18	18	18
71	9	37	6	....	2	1	4	6	55	64	64	55	41	9	55	55	57	64
72	3	47	2	1	1	3	2	....	38	58	58	38	59	21	38	38	38	58
73	....	23	2	....	4	8	....	3	27	40	40	27	40	13	27	27	27	40
74	5	24	3	....	13	6	2	1	40	54	54	54	30	14	40	40	40	54
75	2	35	2	....	4	....	2	3	37	48	48	48	34	11	37	48	37	48
76	9	31	3	....	6	3	1	....	38	53	53	53	37	18	38	53	43	53
77	17	55	4	....	9	9	4	3	77	101	101	101	56	24	77	77	77	101
78	10	27	1	....	6	3	....	2	42	47	46	42	42	9	42	42	42	48
79	11	15	2	1	8	5	5	3	31	50	50	50	50	19	31	50	31	50
80	10	10	2	....	11	5	12	....	35	50	50	50	29	15	35	21	35	50
81	....	31	1	....	2	1	8	....	30	43	43	43	28	13	30	43	30	43
82	1	26	2	....	....	1	....	....	16	30	30	24	20	14	16	16	16	30
83	12	46	2	1	5	3	9	1	60	79	79	79	41	25	54	54	54	79
84	1	30	4	....	2	4	1	....	32	42	42	42	32	10	32	32	32	42
85	5	25	....	....	6	7	4	....	37	35	36	37	40	18	37	37	37	47
86	9	31	1	....	4	4	6	1	32	56	56	56	39	24	32	32	32	56
87	13	42	4	....	3	1	3	6	44	72	72	72	55	28	72	72	44	72
88	....	61	5	....	7	6	2	....	53	74	74	74	52	21	53	53	53	74
89	9	35	....	....	16	13	7	1	56	81	81	81	81	25	56	56	56	81
90	3	23	5	2	7	2	5	....	40	47	47	47	24	10	40	40	40	47
91	6	10	....	....	1	13	2	3	29	35	35	35	35	7	29	29	29	35
92	8	6	1	....	10	9	10	5	49	49	49	49	22	....	49	49	49	49
93	4	11	....	....	5	6	2	....	28	28	28	28	15	....	28	28	28	28
94	5	23	2	....	2	3	....	3	26	38	38	38	35	12	26	26	26	38
95	3	7	....	....	2	....	....	....	12	12	12	12	12	....	12	12	12	12
96	1	28	2	....	2	14	....	....	36	47	47	47	37	21	26	47	26	47
97	6	23	....	....	7	4	8	....	26	48	48	48	48	22	26	48	26	48
98	18	65	3	....	3	1	....	....	61	90	90	90	78	29	61	61	61	90
99	15	25	2	....	10	7	2	....	43	61	61	33	43	13	43	43	35	59
100	4	10	1	....	4	7	2	....	28	28	28	28	28	....	28	28	28	28
101	5	31	....	....	3	5	....	2	44	46	45	45	18	4	....	41	44	45
102	5	21	....	....	2	....	....	4	32	32	32	32	17	....	32	32	32	32
103	8	6	1	....	13	8	18	1	45	55	55	55	31	10	45	45	45	55
104	4	23	....	....	5	....	1	....	25	33	33	33	23	8	25	25	25	33

CONTINUATION

II. TABLE I—ATTENDANCE, PUPILS IN THE SCHOOLS

Continuation Schools—Con.	Number of Pupils in the Various Subjects—Continued.						
	Geometry	French	German	Latin	Zoology	Botany	Chemistry
53 Hanover	48	38	40	71	61	61	50
54 Harrow	19	29	.....	29	23	23	19
55 Havelock	20	24	.....	30	23	23	20
56 Highgate	27	24	.....	42	49	49	45
57 Huntsville	39	60	.....	57	50	50	39
58 Jarvis	39	34	.....	36	39	39	16
59 Jockvale	19	25	.....	25	25	25	19
60 Kars	19	.....	.....	.....	14	14	19
61 Keewatin	27	31	.....	37	31	31	27
62 Kenmore	36	38	.....	36	37	37	35
63 Lakefield	53	34	.....	30	44	44	68
64 Lanark	91	74	.....	88	45	45	68
65 Lansdowne	15	32	.....	32	32	32	15
66 Little Current	17	18	.....	20	28	28	19
67 Lucknow	70	59	.....	85	66	66	41
68 Malakoff	9	13	.....	13	11	11	9
69 Manitowaning	12	5	.....	14	23	23	12
70 Manotick	12	7	.....	17	18	18	12
71 Maxville	41	41	.....	47	55	55	41
72 Melbourne	44	45	.....	45	38	38	44
73 Merlin	23	40	.....	40	27	27	23
74 Merrickville	30	40	.....	36	40	40	30
75 Metcalfe	34	22	.....	32	37	37	34
76 Millbrook	39	41	.....	46	35	35	39
77 Milton	56	88	.....	90	77	77	56
78 Mount Albert	48	38	.....	40	42	42	23
79 New Hamburg	36	.....	37	40	31	31	36
80 New Liskeard	29	34	.....	50	35	35	30
81 North Augusta	28	39	.....	41	30	30	28
82 North Gower	20	25	.....	28	16	16	20
83 Norwich	40	59	.....	60	54	54	40
84 Odessa	32	32	.....	32	32	32	32
85 Oil Springs	38	12	.....	19	37	37	26
86 Orono	39	21	.....	55	32	32	39
87 Paisley	55	38	.....	55	44	44	38
88 Pakenham	52	81	7	81	81	81	74
89 Palmerston	81	48	.....	57	56	56	58
90 Plattsville	24	44	.....	47	40	40	24
91 Port Burwell	19	27	.....	28	29	29	14
92 Port Colborne	49	40	.....	38	49	49	15
93 Powassan	15	25	.....	24	28	28	15
94 Princeton	35	13	.....	14	26	26	35
95 Richard's Landing	12	.....	.....	7	12	12	12
96 Richmond	37	16	.....	24	26	26	37
97 Ridgeway	40	22	.....	46	26	26	40
98 Ripley	78	54	.....	68	61	61	78
99 Rodney	43	25	.....	20	43	43	13
100 Russell	18	28	.....	28	28	28	7
101 St. George	19	40	.....	41	42	42	14
102 Schomberg	17	22	.....	19	32	32	17
103 Southampton	55	49	.....	48	45	45	31
104 Spencerville	23	22	.....	22	25	25	23

SCHOOLS—Continued

AND IN THE VARIOUS SUBJECTS, ETC.—Continued

	Number of Pupils in the Various Subjects—Continued							Special Courses		
	Physics	Writing	Bookkeeping	Stenography	Typewriting	Art	Physical Culture	Commercial	Agriculture	Art (Middle School)
53	77	61	.....	.....	.....	61	77	.....	.....	.....
54	30	23	.....	.....	.....	23	30	.....	.....	.....
55	30	23	23	.....	.....	23	30	.....	.....	.....
56	67	49	.....	.....	.....	49	67	.....	.....	.....
57	70	50	50	.....	.....	50	70	.....	.....	.....
58	39	39	.....	.....	.....	39	39	.....	.....	.....
59	25	25	.....	.....	.....	25	25	.....	.....	.....
60	23	14	14	.....	.....	16	23	.....	.....	.....
61	39	27	27	.....	.....	32	39	.....	.....	.....
62	53	.....	.....	.....	.....	37	53	.....	.....	.....
63	6	.....	11	.....	.....	44	45	.....	.....	.....
64	91	45	22	.....	.....	45	91	.....	.....	.....
65	32	32	.....	.....	.....	32	32	.....	.....	.....
66	28	28	9	.....	.....	28	28	.....	.....	.....
67	91	67	.....	.....	.....	67	91	.....	.....	.....
68	13	11	.....	.....	.....	11	13	.....	.....	.....
69	25	23	.....	.....	.....	23	20	.....	.....	.....
70	18	18	.....	.....	.....	18	18	.....	.....	.....
71	64	55	24	.....	.....	57	65	.....	.....	.....
72	59	38	11	.....	.....	41	59	.....	.....	.....
73	40	27	10	.....	.....	27	40	.....	.....	.....
74	30	40	16	.....	.....	40	40	.....	.....	.....
75	48	37	14	.....	.....	37	48	.....	.....	.....
76	53	38	29	.....	.....	42	53	.....	.....	4
77	101	77	.....	.....	.....	77	101	.....	.....	.....
78	49	42	.....	.....	.....	42	.....	.....	.....	.....
79	50	31	.....	.....	.....	28	50	.....	.....	.....
80	50	21	26	.....	.....	35	50	.....	17	.....
81	43	30	15	.....	.....	30	43	.....	.....	.....
82	30	16	.....	.....	.....	16	30	.....	.....	.....
83	79	54	.....	.....	.....	54	79	.....	.....	.....
84	42	32	15	.....	.....	33	42	.....	.....	.....
85	47	37	.....	.....	.....	43	46	.....	.....	7
86	56	32	.....	.....	.....	32	56	.....	.....	.....
87	72	72	18	.....	.....	44	64	.....	.....	.....
88	74	53	.....	.....	.....	53	81	.....	.....	.....
89	81	56	.....	.....	.....	56	81	.....	.....	.....
90	47	40	.....	.....	.....	40	47	.....	.....	.....
91	35	35	24	.....	.....	27	35	.....	.....	.....
92	49	49	.....	.....	.....	49	49	.....	.....	.....
93	28	28	.....	.....	.....	28	28	.....	.....	.....
94	38	.....	.....	.....	.....	38	.....	.....	.....	.....
95	12	12	.....	.....	.....	12	.....	.....	.....	.....
96	47	26	26	.....	.....	26	47	.....	.....	.....
97	48	26	26	.....	.....	26	48	.....	.....	4
98	90	61	61	.....	.....	70	.....	.....	.....	8
99	43	43	31	.....	.....	43	61	.....	.....	.....
100	28	28	.....	.....	.....	28	28	.....	.....	.....
101	45	43	.....	.....	.....	40	46	.....	.....	.....
102	32	32	32	.....	.....	32	32	.....	.....	.....
103	55	45	.....	.....	.....	45	55	.....	.....	.....
104	33	10	6	.....	.....	25	33	.....	.....	.....

CONTINUATION

II. TABLE I—ATTENDANCE, PUPILS IN THE SCHOOLS

Continuation Schools—Continued	Pupils				Number of Pupils in—			Number of Pupils from—		
	Boys	Girls	Total Number of Pupils	Average Daily Attendance	Lower School	Middle School	Upper School	Municipalities forming C. S. District or from School Section	Other Sections	No. of other Sections thus represented
105 Springfield	15	14	29	18	22	7	.....	16	13	4
106 Stayner	30	42	72	46	53	19	.....	37	35	10
107 Stella	11	19	30	17	25	5	.....	19	11	3
108 Stouffville	35	32	67	42	51	16	.....	31	36	8
109 Sturgeon Falls	5	14	19	10	19	.....	.....	14	5	2
110 Sutton	15	28	43	26	31	12	.....	25	18	5
111 Tamworth	20	45	65	52	56	9	.....	28	37	12
112 Tara	22	58	80	54	46	34	.....	38	42	15
113 Tavistock	20	25	45	35	34	11	.....	33	12	2
114 Teeswater	37	34	71	46	36	35	.....	35	36	13
115 Thamesville	23	34	57	49	36	21	.....	38	19	8
116 Thessalon	21	42	63	35	52	11	.....	33	30	8
117 Thornbury	28	36	64	41	51	13	.....	25	39	13
118 Thorndale	19	33	52	35	33	19	.....	45	7	4
119 Tilbury	15	22	37	22	30	7	.....	19	18	7
120 Tottenham	26	42	68	37	50	18	.....	23	45	9
121 Tweed	18	50	68	45	57	11	.....	23	45	16
122 Wallaceburg	59	78	137	75	106	31	.....	88	49	15
123 Warkworth	34	41	75	45	48	27	.....	25	50	14
124 Webbwood	6	12	18	10	18	.....	.....	17	1	1
125 West Lorne	12	20	32	20	32	.....	.....	27	5	4
126 Westmeath	14	29	43	22	43	.....	.....	23	20	2
127 Westport	16	25	41	28	30	11	.....	24	17	13
128 Westport (R.C.S.S.)	16	23	39	27	25	14	.....	27	12	5
129 Wheatley	25	28	53	32	38	15	.....	34	19	6
130 Winona	11	17	28	12	28	.....	.....	22	6	3
131 Wolfe Island	10	8	18	11	14	4	.....	11	7	3
132 Wroxeter	34	25	59	37	47	12	.....	47	12	3
1 Totals, 1915	2,803	3,997	6,800	4,274	5,020	1,767	13	4,019	2,781	1,003
2 Totals, 1914	2,474	3,595	6,069	3,812	4,345	1,704	20	3,662	2,407	952
3 Increases	329	402	731	462	675	63	.....	357	374	51
4 Decreases	.....	.....	.....	.....	.....	.....	7	.....	.....	.....
5 Percentages	41.22	58.77	.....	62.85	73.82	25.98	.19	59.10	40.89	.....

SCHOOLS—Continued

AND IN THE VARIOUS SUBJECTS, ETC.—Continued

		Number of Pupils from Families whose Head is occupied as below—							Number of Pupils in the Various Subjects					
	Commerce	Agriculture	Law, Medicine or the Church	Teaching	The Trades	Labouring occupations	Other occupations	Without occupation	English Grammar	English Composition and Rhetoric	English Literature	Canadian History	British History	Ancient History
105	4	13	.....	.....	9	3	.....	.....	22	29	29	29	21	7
106	18	30	1	1	7	12	3	.....	53	72	72	72	44	19
107	1	26	.....	.....	3	.....	.....	.....	25	30	30	30	23	5
108	10	33	5	.....	7	2	8	2	57	67	67	67	47	11
109	..	.....	.....	1	11	.....	7	.....	19	19	19	19	19	.....
110	4	31	3	.....	.....	1	.....	4	31	43	43	43	30	12
111	13	36	5	1	6	1	1	2	56	65	65	65	65	9
112	8	44	9	.....	12	6	.....	1	46	80	80	80	51	34
113	8	19	4	.....	11	.....	3	.....	39	45	45	39	39	11
114	4	36	1	.....	12	6	.....	12	36	71	71	71	50	35
115	8	18	3	.....	12	2	14	.....	36	53	53	53	40	17
116	13	28	1	.....	7	5	9	.....	52	63	63	63	35	11
117	4	33	7	.....	12	.....	3	5	64	64	64	64	44	13
118	2	44	2	.....	1	2	1	.....	40	52	52	52	38	19
119	9	17	2	.....	3	1	4	1	30	37	37	37	37	7
120	5	38	5	2	3	7	6	2	41	68	68	68	51	18
121	12	33	6	3	5	3	5	1	57	68	68	68	37	11
122	18	33	7	1	29	25	15	9	91	137	91	137	77	31
123	2	65	6	.....	.....	2	.....	.....	56	75	75	75	75	27
124	4	3	1	.....	.....	.....	10	.....	18	18	18	18	18	.....
125	5	24	.....	.....	.....	.....	3	.....	32	32	32	32	19	.....
126	7	26	1	.....	2	3	3	1	43	41	43	43	28	.....
127	11	20	2	.....	2	1	2	3	30	40	40	41	20	11
128	4	21	.....	.....	.....	6	8	.....	39	39	39	39	39	7
129	9	20	2	.....	7	3	12	.....	38	53	53	53	53	53
130	2	20	.....	1	1	2	.....	2	28	28	28	28	28	.....
131	2	5	.....	.....	8	.....	3	.....	14	18	18	18	18	4
132	10	25	.....	.....	9	4	10	1	47	59	59	59	59	12
1	866	3,392	278	29	889	603	566	177	5,077	6,634	6,588	6,457	5,296	1,747
2	803	2,955	280	29	791	520	529	162	4,435	5,955	5,968	5,711	4,847	1,707
3	63	437	.....	.....	98	83	37	15	642	679	620	746	449	40
4	...	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	12.73	49.88	4.09	.43	13.07	8.86	8.32	2.60	74.66	97.55	96.88	94.95	77.88	25.69

CONTINUATION

II. TABLE I—ATTENDANCE, PUPILS IN THE SCHOOLS

Continuation Schools—Con.	Number of Pupils in the Various Subjects—Concluded							
	Geography	Reading	Arithmetic and Mensuration	Algebra	Geometry	French	German	Latin
105 Springfield	22	22	22	29	21	26	.....	28
106 Stayner	53	53	55	72	44	50	.....	54
107 Stella	25	30	25	30	23	13	.....	12
108 Stouffville	55	55	55	67	47	59	.....	61
109 Sturgeon Falls	19	19	19	19	19	5	.....	17
110 Sutton	31	31	31	43	13	38	.....	39
111 Tamworth	56	56	56	65	36	61	.....	63
112 Tara	46	46	46	80	51	20	.....	47
113 Tavistock	39	39	39	45	32	.....	41	40
114 Teeswater	36	36	36	71	71	40	.....	64
115 Thamesville	36	36	36	53	40	40	.....	44
116 Thessalon	52	52	52	63	35	3	.....	25
117 Thornbury	64	51	51	64	44	58	.....	64
118 Thorndale	40	40	40	52	38	49	.....	49
119 Tilbury	30	30	30	37	20	17	.....	16
120 Tottenham	50	50	50	68	51	43	.....	52
121 Tweed	57	31	57	68	37	59	.....	61
122 Wallaceburg	137	91	106	122	77	38	.....	104
123 Warkworth	56	56	56	75	56	66	.....	69
124 Webbwood	18	18	18	18	10	17	.....	17
125 West Lorne	32	32	32	32	19	8	.....	13
126 Westmeath	43	43	43	43	28	24	.....	30
127 Westport	30	30	30	40	19	30	.....	39
128 Westport (R.C.S.S.)	25	39	32	39	28	33	.....	33
129 Wheatley	38	38	38	53	39	37	.....	49
130 Winona	28	28	28	28	13	28	.....	27
131 Wolfe Island	14	14	14	18	14	14	.....	18
132 Wroxeter	47	47	47	59	38	48	.....	50
1 Totals, 1915	5,072	5,139	5,077	6,639	4,581	4,420	160	5,323
2 Totals, 1914	4,537	4,612	4,438	5,922	3,935	3,846	177	4,733
3 Increases	535	527	639	717	646	574	.....	590
4 Decreases	.....	.....	.....	.....	.....	.....	17	.....
5 Percentages	74.58	75.57	74.66	97.63	67.36	65.	2.35	78.27

SCHOOLS—Continued

AND IN THE VARIOUS SUBJECTS, ETC.—Concluded

	Number of Pupils in the Various Subjects—Concluded										Special Courses		
	Zoology	Botany	Chemistry	Physics	Writing	Bookkeeping	Stenography	Typewriting	Art	Physical Culture	Commercial	Agriculture	Art (Middle School)
105	22	22	21	29	24	.....	.....	.....	22	29	.....	.....	.....
106	53	53	44	72	72	18	.....	.....	53	72	.....	.....	.....
107	25	25	23	30	25	7	.....	.....	25	.....	.....	.....	.....
108	67	67	47	67	57	.....	.....	.....	57	67	.....	.....	.....
109	19	19	12	19	19	.....	.....	.....	19	19	.....	.....	.....
110	31	31	30	31	31	.....	.....	.....	31	43	.....	.....	.....
111	56	56	36	65	56	.....	.....	.....	56	64	.....	.....	.....
112	46	46	51	80	46	.....	.....	.....	46	80	.....	.....	.....
113	39	39	11	45	39	.....	.....	.....	39	45	.....	.....	.....
114	36	36	50	71	36	.....	.....	.....	36	71	.....	.....	.....
115	36	36	40	53	36	.....	.....	.....	36	53	.....	.....	.....
116	52	52	35	63	52	8	.....	.....	52	63	.....	.....	1
117	51	51	44	64	51	.....	.....	.....	51	64	.....	.....	.....
118	40	40	38	52	40	.....	.....	.....	40	52	.....	.....	.....
119	30	30	20	37	30	.....	.....	.....	30	35	.....	.....	.....
120	50	50	68	68	50	50	.....	.....	50	68	.....	.....	4
121	57	57	37	68	57	.....	.....	.....	57	68	.....	.....	.....
122	91	91	77	122	122	60	15	15	91	137	.....	.....	.....
123	56	56	55	75	56	56	.....	.....	62	75	.....	.....	.....
124	18	18	10	18	18	4	.....	.....	18	18	.....	.....	.....
125	32	32	19	32	32	20	.....	.....	32	20	.....	.....	.....
126	43	43	28	43	43	.....	.....	.....	43	43	.....	.....	.....
127	30	30	20	41	30	.....	.....	.....	30	41	.....	.....	.....
128	25	25	28	39	39	25	.....	.....	25	39	.....	.....	.....
129	38	38	49	53	38	.....	.....	.....	40	53	.....	.....	.....
130	28	28	28	28	28	.....	.....	.....	28	28	.....	.....	.....
131	14	14	14	18	14	8	.....	.....	14	12	.....	.....	.....
132	47	47	26	59	47	.....	.....	.....	47	59	.....	.....	5
1	5,042	5,042	4,186	6,461	4,739	1,371	32	34	5,066	6,258	17	175	65
2	4,374	4,392	3,923	5,777	4,260	935	49	42	4,385	4,327	26	167	61
3	668	650	263	684	479	436	.....	.....	381	1,931	.....	8	4
4	....	.....	.....	.....	.....	.....	17	8	.....	.....	9	.....	.....
5	74.14	74.14	61.55	95.01	69.69	20.16	.47	.5	74.5	92.02	.25	2.57	.95

CONTINUATION

III. TABLE J—MISCELLANEOUS

Continuation Schools	Brick, Stone, Cement or Frame School House	No. of Acres in Play-ground	Schools under Public or Separate School Board	Value of General Library	Scientific Apparatus	Biological Specimens	Charts, Maps and Globes	Art Models	Typewriters	Gymnasium, not including equipment	Equipment of Gymnasium or Equip. for Physical Culture	Museum	Aquarium or Herbarium
				$	$	$	$	$	$	$	$	$	$
1 Acton	B	1¾	1	261	195	4	22	35	....	.....	.....	...	....
2 Agincourt	B	3	1	117	85	30	71	10	....	.....	.....	...	....
3 Alvinston	B	3	1	252	371	19	91	35	....	.....	.....	...	....
4 Arkona	B	1	1	156	146	11	25	25	....	.....	.....	...	....
5 Ayr	B	6	....	161	306	25	40	17	....	.....	.....	...	....
6 Bancroft	C	2	1	56	105	....	36	8	....	.....	.....	...	....
7 Bath	B	1	1	160	192	....	31	24	....	.....	.....	...	....
8 Beaverton	B	4	1	178	270	....	54	29	100	.....	22	...	....
9 Beeton	B	2	1	226	372	....	40	35	....	.....	.....	...	....
10 Belmont	B	3	1	228	441	34	43	22	....	.....	.....	...	....
11 Blenheim	B	1½	1	436	508	13	91	52	....	.....	.....	...	....
12 Blind River	F	3	1	121	161	12	.....	19	....	.....	.....	...	....
13 Blyth	B	2	1	152	191	....	86	34	....	.....	.....	...	....
14 Bothwell	B	1½	1	214	174	....	30	10	....	.....	.....	...	....
15 Bowesville	B	2½	1	176	157	....	30	16	....	.....	.....	...	....
16 Bracebridge	B	1	1	437	617	....	78	102	....	.....	.....	...	....
17 Bridgeburg	B	2	1	212	244	12	22	13	....	.....	1,240	...	....
18 Bruce Mines	F	3	1	241	376	6	46	24	....	.....	3	...	....
19 Brussels	B	1	1	319	250	7	80	35	....	.....	.....	...	....
20 Burk's Falls	B	1	1	281	349	36	68	72	....	.....	.....	...	....
21 Burlington	B	2	1	178	236	....	96	32	....	.....	.....	...	....
22 Cannington	B	¾	1	186	285	6	20	49	....	.....	.....	...	....
23 Cardinal	F	....	1	211	255	6	63	37	....	.....	.....	...	....
24 Carp	F	....	1	176	220	12	27	18	....	.....	.....	...	....
25 Chapleau	B	....	....	69	215	25	12	14	....	.....	.....	...	....
26 Claremont	B	1	1	283	309	15	61	31	....	.....	.....	...	2
27 Clifford	B	2	1	219	272	12	117	57	....	.....	5	...	1
28 Coldwater	B	1¾	1	212	346	....	32	27	....	.....	.....	...	....
29 Comber	B	2	1	160	246	....	63	30	....	.....	.....	...	....
30 Cookstown	B	2	1	177	343	6	48	43	....	.....	.....	...	....
31 Creemore	B	1	1	163	150	....	7	10	....	.....	.....	...	....
32 Delhi	B	4	1	96	77	....	43	22	....	.....	.....	...	....
33 Drayton	B	1	1	402	498	19	108	52	....	.....	.....	...	....
34 Dresden	B	1¼	1	234	351	10	13	32	....	.....	.....	...	....
35 Drumbo	B	2½	1	152	200	5	54	27	....	.....	.....	...	....
36 Dryden	F	1½	1	83	111	19	30	33	....	.....	.....	...	....
37 Eganville	B	3	1	193	193	....	39	22	....	.....	.....	...	....
38 Eganville (R.C.S.S.)	S	3	1	416	301	51	65	58	240	3500	500	...	....
39 Elmira	B	3	1	103	264	8	25	29	....	.....	.....	...	....
40 Elmvale	B	1½	1	149	457	11	30	25	....	.....	.....	...	....
41 Ennismore	F	2½	1	233	228	....	49	34	....	.....	.....	...	....
42 Erin	B S	½	1	141	345	....	33	17	....	.....	.....	...	....
43 Exeter	B	3	1	492	531	....	85	85	100	.....	.....	...	....
44 Fenelon Falls	S	2½	1	211	297	37	38	27	....	.....	.....	...	....
45 Feversham	B	1	1	116	131	....	18	10	....	.....	.....	...	....
46 Finch	F	2	1	306	335	50	31	58	....	.....	.....	...	....
47 Fingal	B	2	1	148	203	....	54	30	....	.....	16	...	....
48 Fitzroy Harbour	B	¾	1	163	198	....	24	10	....	.....	.....	...	....
49 Fort Frances	B	3¼	1	236	292	14	61	34	....	.....	.....	...	....
50 Frankford	S	1½	1	170	266	....	43	36	....	.....	.....	...	....
51 Gore Bay	F	2	1	132	419	15	64	10	....	.....	.....	...	....
52 Grand Valley	B	1	1	226	351	14	65	31	....	.....	.....	...	....

SCHOOLS—Continued

INFORMATION

Equipment		Religious and other Exercises						Destination of Pupils							
Pictures	Total value of General Equipment	Schools using authorized Scripture Readings	Schools using the Bible	Schools in which Passages are Memorized	Schools opened with Prayer	Schools closed with Prayer	Commencement Exercises	Commerce	Agriculture	Law, Medicine or the Church	Teaching	The Trades	Other occupations	Other Continuation or High Schools	Without occupation
$	$														
1 9	526	.....	1	.....	1	1	1	2	1	1	3	2	1	3	....
2	313	1	1	.....	1	1	1	.....	1	....	.....	....	1	.....	....
3	768	.....	....	.....	1	....	....	3	1	....	6	....	9	4	....
4	363	1	....	.....	1	....	....	3	9	2	.....	2	1	.....	....
5	549	.....	....	.....	1	....	....	.....	.....	....	.....	4	.....	3	4
6	205	.....	1	.....	1	....	....	2	3	....	1	....	9	1	1
7	407	1	....	.....	1	....	1	1	7	....	1	....	.....	1	5
8 18	671	.....	....	.....	1	....	....	3	3	....	2	....	8	4	....
9	673	1	....	.....	1	....	1	2	5	1	4	3	.....	3	....
10 5	773	1	1	.....	1	1	1	.....	1	2	4	....	.....	.....	....
11	1,100	.....	1	.....	1	....	1	3	4	....	3	3	9	5	2
12	313	1	1	.....	1	....	....	1	.....	....	1	....	2	.....	2
13	463	.....	1	.....	1	....	....	3	1	....	1	....	.....	3	....
14	428	.....	....	.....	1	....	....	.....	.....	....	3	....	.....	2	1
15	379	.....	....	.....	1	....	....	.....	4	....	.....	....	.....	3	3
16 28	1,262	.....	....	.....	1	....	....	3	1	....	12	....	15	2	....
17	1,743	1	1	.....	1	1	....	1	.....	....	2	4	1	8	1
18	696	1	....	.....	1	....	....	1	1	....	3	....	5	1	....
19 45	736	1	1	.....	1	....	....	.....	1	....	11	2	2	3	3
20	806	1	1	.....	1	....	....	.....	.....	....	4	....	6	2	1
21	542	1	....	.....	1	....	....	.....	2	1	.....	....	2	.....	....
22	546	.....	1	.....	1	....	....	3	1	2	4	....	6	.....	....
23 20	592	.....	....	.....	1	....	1	5	2	1	3	10	2	.....	2
24	453	1	....	.....	1	....	....	.....	6	3	2	....	7	2	....
25 6	341	.....	1	.....	1	....	....	2	.....	....	.....	....	.....	.....	2
26 18	719	.....	....	.....	1	....	....	.....	4	1	1	....	2	1	....
27 26	709	1	....	.....	1	....	....	1	2	1	.....	1	.....	3	3
28	617	.....	1	.....	1	1	....	.....	.....	....	.....	....	6	2	....
29 20	519	.....	....	.....	1	....	....	2	1	....	2	....	3	1	....
30	617	.....	1	.....	1	....	....	4	4	....	.....	....	6	2	5
31 8	338	1	1	.....	1	....	....	.....	2	....	.....	....	.....	5	2
32 4	242	1	....	.....	1	....	1	.....	.....	....	.....	1	.....	.....	....
33	1079	.....	1	.....	1	....	....	1	10	1	7	1	3	4	4
34	640	.....	....	.....	1	....	....	.....	6	....	1	....	1	10	1
35 20	458	1	1	.....	1	1	....	.....	.....	....	.....	....	.....	.....	2
36	276	.....	1	.....	1	....	....	1	1	....	.....	....	2	1	1
37	447	.....	1	.....	1	1	....	2	.....	....	.....	....	5	12	....
38 26	5,157	.....	....	.....	1	1	....	2	1	1	4	....	2	2	2
39	429	.....	....	.....	1	....	1	.....	.....	....	.....	2	3	1	....
40	672	.....	1	.....	1	1	....	2	9	2	1	6	.....	3	....
41 12	556	.....	....	.....	1	1	1	1	5	....	5	....	3	.....	2
42	536	.....	....	.....	1	....	....	.....	3	1	1	....	9	1	....
43	1,293	.....	1	.....	1	....	1	9	17	....	5	1	8	2	4
44	610	1	....	.....	1	1	....	1	.....	....	3	....	.....	.....	2
45 18	293	.....	1	.....	1	....	....	.....	1	....	.....	....	1	1	....
46	780	1	....	.....	1	1	....	.....	6	....	1	....	1	2	2
47	451	1	....	.....	1	....	....	.....	1	....	1	2	.....	2	1
48	395	1	1	.....	1	....	....	.....	3	....	2	....	3	2	....
49	637	.....	1	.....	1	....	....	2	1	....	3	....	3	.....	1
50	515	.....	....	.....	1	....	....	.....	.....	1	1	....	.....	.....	....
51	640	.....	1	.....	1	1	....	.....	.....	....	2	....	5	4	....
52 21	708	.....	1	.....	1	....	....	2	5	2	6	....	4	1	1

CONTINUATION

III. TABLE J—MISCELLANEOUS

Continuation Schools —Continued	Brick, Stone, Cement or Frame School House	No. of Acres in Playground	Schools under Public or Separate School Board	Value of General Library	Scientific Apparatus	Biological Specimens	Charts, Maps and Globes	Art Models	Typewriters	Gymnasium, not including Equipment	Equipment of Gymnasium or Equipment for Physical Culture	Museum	Aquarium or Herbarium
				$	$	$	$	$	$	$	$	$	$
53 Hanover	B	3	1	361	345	35	48	40	....	.....	22	...	....
54 Harrow	B	....	1	140	171	....	17	17	....	.....	.....	...	....
55 Havelock	C	1	1	188	265	27	30	35	....	.....	.....	...	....
56 Highgate	B	2	1	225	260	....	45	39	....	.....	.....	...	....
57 Huntsville	B	1½	1	325	542	28	68	58	....	.....	.....	...	....
58 Jarvis	B	1½	1	221	175	6	31	24	....	.....	.....	...	....
59 Jockvale	B	1	1	114	175	15	35	22	....	.....	.....	...	2
60 Kars	C	2	1	160	146	11	37	25	....	.....	.....	...	....
61 Keewatin	B	1	1	206	393	18	69	35	....	.....	.....	...	3
62 Kenmore	F	½	1	159	289	10	38	13	....	.....	.....	...	....
63 Lakefield	B	2	1	144	350	....	36	27	....	.....	.....	...	....
64 Lanark	S	2	1	352	323	8	55	41	....	.....	.....	...	....
65 Lansdowne	B	2	1	99	155	14	26	25	....	.....	.....	...	....
66 Little Current	F	4	1	122	116	....	52	49	....	.....	.....	...	....
67 Lucknow	B	1½	1	334	350	....	34	26	....	.....	.....	...	....
68 Malakoff	C	1	1	100	125	....	17	4	....	.....	.....	...	....
69 Manitowaning	F	4	1	108	116	9	33	14	....	.....	.....	...	....
70 Manotick	F	⅗	1	140	190	....	39	10	....	.....	.....	...	....
71 Maxville	B	1	1	154	137	8	25	17	....	.....	.....	...	....
72 Melbourne	B	10	1	192	195	14	31	23	....	.....	.....	...	....
73 Merlin	B	1	1	192	185	....	53	35	....	.....	17	...	....
74 Merrickville	B	1	1	308	258	23	28	23	....	.....	.....	...	....
75 Metcalfe	B	2½	1	230	198	....	49	23	....	.....	.....	...	....
76 Millbrook	B	2	1	364	330	43	71	50	....	.....	.....	...	....
77 Milton	S	1½	1	360	384	50	60	34	....	.....	.....	...	....
78 Mount Albert	B	2½	1	315	277	6	37	35	....	.....	.....	...	....
79 New Hamburg	B	2	1	288	364	18	65	48	....	.....	.....	...	....
80 New Liskeard	F	....	1	334	351	50	81	37	....	.....	.....	...	....
81 North Augusta	C	1	1	221	200	....	55	23	....	.....	.....	...	....
82 North Gower	C	2½	1	211	170	....	29	27	....	.....	.....	...	....
83 Norwich	B	1	1	324	204	10	78	29	....	.....	5	...	2
84 Odessa	B	....	1	222	311	....	69	39	....	.....	.....	...	....
85 Oil Springs	B	3	1	191	242	9	25	30	....	.....	.....	...	....
86 Orono	B	1⅗	1	158	198	....	21	14	....	.....	.....	...	....
87 Paisley	B	3	1	25	437	81	60	26	....	.....	.....	...	....
88 Pakenham	S	1¼	1	215	312	7	37	57	....	.....	.....	...	....
89 Palmerston	B	1	1	317	238	12	48	50	....	.....	.....	...	....
90 Plattsville	B	⅘	1	117	351	....	25	27	....	.....	.....	...	....
91 Port Burwell	F	⅓	1	200	296	5	38	33	....	.....	.....	...	....
92 Port Colborne	B	2½	1	287	428	....	72	39	....	.....	40	...	....
93 Powassan	B	3	1	122	199	....	24	18	....	.....	.....	...	....
94 Princeton	B	2	1	256	159	23	9	20	....	.....	.....	...	....
95 Richard's Landing	F	2	....	96	165	12	25	10	....	.....	.....	...	....
96 Richmond	F	3	1	136	174	....	16	22	....	.....	3	...	....
97 Ridgeway	B	1	1	131	254	....	55	28	....	.....	.....	...	....
98 Ripley	B	2½	1	259	227	....	23	18	....	.....	.....	...	....
99 Rodney	B	2½	1	202	245	6	22	23	....	.....	6	...	....
100 Russell	B	3	1	179	204	....	63	34	....	.....	.....	...	....
101 St. George	B	7	....	174	216	30	41	28	....	.....	.....	...	....
102 Schomberg	B	1	1	139	130	....	38	21	....	.....	.....	...	....
103 Southampton	B	¾	1	286	369	15	62	37	60	.....	.....	...	....
104 Spencerville	S	5	1	152	236	5	35	31	....	.....	.....	...	....

SCHOOLS—Continued

INFORMATION—Continued

Equipment		Religious and other Exercises						Destination of Pupils							
Pictures	Total value of General Equipment	Schools using authorized Scripture Readings	Schools using the Bible	Schools in which Passages are memorized	Schools opened with Prayer	Schools closed with Prayer	Commencement Exercises	Commerce	Agriculture	Law, Medicine or the Church	Teaching	The Trades	Other occupations	Other Continuation or High Schools	Without occupation
$	$														
53 28	879	.....	1	.....	1	1	....	1	1	....	5	3	3	3	3
54....	345	.....	1	.....	1	1	....	.....	.....	....	.....	1	1	1	3
55 25	570	1	1	.....	1	....	....	1	1	3	1	1	3	7	....
56....	569	1	....	.....	1	....	....	3	4	....	2	....	1	3	....
57 20	1,041	.....	1	.....	1	....	....	.....	.....	....	5	2	1	.....	3
58....	457	.....	1	.....	1	1	....	.....	3	....	3	....	3	5	....
59....	363	.....	....	.....	1	1	1	.....	5	2	4	....	....	1	....
60....	379	.....	1	.....	1	....	....	.....	4	....	.....	....	1	2	....
61 10	734	.....	1	.....	1	....	....	1	.....	....	3	1	7	1	1
62....	509	.....	1	.....	1	....	....	.....	.....	....	2	....	....	1	9
63 1	558	1	1	.....	1	....	1	1	1	....	3	....	2	3	1
64 5	784	1	....	.....	1	....	....	.....	6	....	7	1	3	6	2
65....	319	.....	1	.....	1	1	....	.....	2	....	.....	....	3	5	....
66 9	348	.....	1	.....	1	....	....	2	1	....	1	....	1	3	....
67 6	750	.....	1	.....	1	....	....	3	4	....	7	2	2	4	....
68....	246	.....	1	.....	1	....	....	.....	1	....	3	....	....	.....	....
69 5	285	1	1	.....	1	....	....	.....	.....	....	3	....	1	1	....
70 15	394	.....	1	.....	1	....	....	.....	2	....	.....	....	....	4	2
71 20	361	1	1	.....	1	1	....	2	.....	....	2	....	1	4	2
72 8	463	.....	1	.....	1	....	....	.....	7	....	5	....	4	1	....
73 5	487	1	....	.....	1	1	....	.....	4	....	1	....	....	3	....
74....	640	1	1	.....	1	....	* 1	1	.....	....	3	....	2	3	4
75 16	516	.....	1	.....	1	....	....	.....	2	....	2	....	3	4	7
76 4	862	.....	1	.....	1	....	....	4	.....	....	.....	1	1	4	2
77....	888	.....	....	.....	1	....	....	1	5	....	.....	2	1	8	....
78....	670	.....	1	.....	1	....	1	3	3	1	1	....	2	1	....
79....	783	1	....	.....	1	1	1	1	1	1	3	....	....	2	....
80....	853	.....	1	.....	1	....	....	5	.....	....	4	1	1	.....	3
81....	499	.....	....	.....	1	....	1	.....	1	....	3	....	1	.....	....
82....	437	1	1	.....	1	....	....	.....	1	....	1	....	....	1	1
83 8	660	1	1	.....	1	....	....	1	1	....	.....	....	3	4	....
84....	641	1	1	.....	1	....	....	.....	.....	....	2	1	3	2	4
85....	497	.....	1	.....	1	....	....	2	1	....	10	1	4	2	1
86....	391	1	1	.....	1	....	....	1	3	....	5	....	3	.....	....
87....	629	.....	1	.....	1	1	....	4	6	....	3	1	1	4	....
88....	628	.....	....	.....	1	....	....	.....	4	....	6	....	3	8	8
89 15	680	.....	1	.....	1	....	....	3	3	....	4	2	8	2	....
90....	520	1	....	.....	1	....	....	.....	2	....	3	....	....	4	1
91....	572	1	1	.....	1	1	....	2	3	....	1	....	....	1	1
92....	866	.....	1	.....	1	....	....	3	2	....	.....	....	....	5	2
93 10	373	.....	1	.....	1	....	....	.....	.....	....	1	....	....	3	1
94....	467	1	....	.....	1	....	....	1	3	....	4	....	3	1	1
95....	308	1	....	.....	1	....	....	.....	.....	....	1	....	....	.....	....
96....	351	1	1	.....	1	....	....	.....	3	....	1	4	1	.....	....
97....	468	.....	1	.....	1	....	....	1	1	1	5	....	7	1	....
98....	527	1	1	.....	1	....	....	1	3	2	6	....	1	9	3
99....	504	1	....	.....	1	1	1	.....	.....	2	4	....	2	2	2
100 4	484	1	1	.....	1	....	....	.....	1	....	.....	....	1	.....	....
101....	489	.....	1	.....	1	....	....	1	9	....	1	1	4	1	1
102 3	331	1	1	.....	1	1	....	.....	2	....	.....	....	2	3	2
103 15	844	1	1	.....	1	....	....	.....	1	....	3	....	8	1	....
104....	459	1	....	.....	1	....	....	.....	2	....	.....	....	1	1	4

CONTINUATION

III. TABLE J—MISCELLANEOUS

Continuation Schools—Concluded	Brick, Stone, Cement or Frame School House	No. of Acres in Playground	Schools under Public or Separate School Board	Value of General Library	Scientific Apparatus	Biological Specimens	Charts, Maps and Globes	Art Models	Typewriters	Gymnasium, not including equipment	Equipment of Gymnasium or Equip. for Physical Culture	Museum	Aquarium or Herbarium
				$	$	$	$	$	$	$	$	$	$
105 Springfield	B	2	1	390	645	116	56	47	...	.....	.....	..	....
106 Stayner	B	1	1	171	369	6	39	28	...	.....	.....	..	....
107 Stella	F	3	.....	65	237	.....	2	8	...	.....	.....	..	....
108 Stouffville	B	2	1	172	253	.....	57	39	...	.....	.....	..	....
109 Sturgeon Falls	B	3¼	1	205	280	.....	41	39	...	.....	.....	..	....
110 Sutton	B	1	1	157	158	14	43	26	...	.....	.....	..	....
111 Tamworth	B	1½	.....	258	234	.....	33	28	...	.....	.....	..	....
112 Tara	B	¼	1	183	267	9	49	38	...	.....	.....	..	....
113 Tavistock	B	1	1	215	278	.....	47	.....	...	.....	.....	..	....
114 Teeswater	B	1	1	192	271	3	31	17	...	.....	.....	..	....
115 Thamesville	B	1½	1	322	253	7	14	50	...	.....	.....	..	....
116 Thessalon	B	1½	1	285	297	17	73	26	...	.....	.....	..	....
117 Thornbury	B	2½	1	129	329	28	67	30	...	.....	9	..	....
118 Thorndale	B	½	.....	265	302	17	82	36	...	.....	.....	..	....
119 Tilbury	B	1½	1	207	300	3	26	21	...	.....	5	..	3
120 Tottenham	B	1	1	274	345	.....	32	57	...	.....	.....	..	....
121 Tweed	B	¾	1	260	328	.....	3	24	...	.....	.....	..	....
122 Wallaceburg	B	2	1	344	250	.....	44	59	200	.....	.....	..	....
123 Warkworth	B	¾	1	201	286	10	41	50	...	.....	.....	..	....
124 Webbwood	B	2	1	134	224	....	21	25	...	.....	.....	..	....
125 West Lorne	B	1	1	211	197	7	40	29	...	.....	.....	..	....
126 Westmeath	B	1	1	146	169	15	37	18	...	.....	.....	..	....
127 Westport	B	1	1	249	233	39	36	25	...	.....	.....	..	....
128 Westport (R.C.S.S.)	B	2	1	197	201	.....	37	26	...	.....	.....	..	....
129 Wheatley	C	....	1	216	302	7	16	29	...	.....	.....	..	....
130 Winona	B	2½	1	140	197	.....	21	14	...	.....	7	..	....
131 Wolfe Island	F	¾	1	66	89	.....	.....	.....	...	.....	.....	..	....
132 Wroxeter	B	3	1	450	325	33	52	53	...	.....	11	..	....
1 Totals, 1915	....	....	125	27,779	35,184	1,483	5,722	4,002	700	3,500	1,911	..	13
2 Totals, 1914	....	....	125	27,098	32,439	991	5,647	3,845	760	3,500	640	12	11
3 Increases	....	....	.....	681	2,745	492	75	157	...	.....	1,271	..	2
4 Decreases	....	....	.....	.....	.....	.....	.....	.....	60	.....	.....	12	....
5 Percentages	....	....	94.7	34.31	43.45	1.83	7.06	4.94	.86	4.32	2.36	..	.01

SCHOOLS—Concluded

INFORMATION—Concluded

Equipment			Religious and other Exercises						Destination of Pupils							
	Pictures	Total value of General Equipment	Schools using authorized Scripture Readings	Schools using the Bible	Schools in which Passages are Memorized	Schools opened with Prayer	Schools closed with Prayer	Commencement Exercises	Commerce	Agriculture	Law, Medicine or the Church	Teaching	The Trades	Other occupations	Other Continuation or High Schools	Without occupation
	$	$														
105	7	1,261	1	.....	.....	1	.....	.....	.....	1	.....	.....	3	.....	2	2
106	....	613	.....	1	.....	1	.....	.....	2	2	1	6	....	4	1	.....
107	....	312	.....	1	.....	1	.....	.....	.....	3	....	2	....	.....	1	1
108	....	521	.....	.....	.....	1	.....	.....	.....	3	....	.....	....	4	.....	3
109	....	565	1	1	.....	1	1	.....	.....	.....	....	1	....	3	2	.....
110	....	398	1	1	.....	1	.....	.....	.....	.....	....	2	....	.....	2	3
111	....	553	.....	....	.....	1	.....	.....	2	2	1	3	....	2	1	.....
112	....	546	.....	1	.....	1	.....	.....	2	5	....	4	....	4	4	.....
113	....	540	1	....	.....	1	.....	.....	.....	1	....	2	....	4	2	.....
114	....	514	.....	1	.....	1	.....	.....	2	4	....	.....	....	5	5	5
115	....	646	.....	....	.....	1	.....	.....	.....	5	....	2	....	3	1	.....
116	....	698	1	1	.....	1	.....	.....	.....	1	....	6	1	2	1	5
117	....	592	.....	1	.....	1	.....	.....	.....	.....	....	2	2	7	7	3
118	10	712	1	1	.....	1	.....	1	1	4	1	4	1	1	2	.....
119	15	580	.....	1	.....	1	.....	.....	2	2	1	.....	....	2	4	.....
120	10	718	.....	.....	.....	1	1	.....	1	2	3	5	2	.....	2	.....
121	30	645	.....	1	.....	1	.....	.....	2	2	....	2	1	8	2	.....
122	15	912	.....	.....	.....	1	.....	.....	12	4	....	5	1	6	2	.....
123	10	598	1	1	.....	1	.....	.....	.....	.....	2	2	....	2	1	4
124	....	404	.....	1	.....	1	.....	.....	.....	.....	....	.....	....	1	.....	3
125	....	484	.....	1	.....	1	.....	.....	.....	2	....	.....	....	5	5	.....
126	....	385	1	.....	.....	1	1	.....	2	3	....	2	....	1	6	7
127	....	582	.....	1	.....	1	.....	.....	1	1	....	3	....	3	.....	3
128	4	465	.....	1	1	1	1	.....	.....	.....	....	4	....	2	.....	.....
129	....	570	.....	.....	.....	1	.....	.....	.....	1	....	2	1	7	4	.....
130	15	394	1	1	.....	1	.....	1	4	3	....	.....	....	3	1	2
131	15	170	1	.....	.....	1	.....	.....	.....	3	....	1	....	1	1	.....
132	....	924	.....	.....	.....	1	.....	.....	2	5	....	5	1	1	2	3
1	667	80,961	54	82	1	132	30	20	152	304	44	315	82	340	308	178
2	514	75,457	45	86	1	131	31	14	113	237	29	271	59	193	306	182
3	153	5,504	9	.....	.....	1	.....	6	39	67	15	44	23	147	2	.....
4	....	.....	.....	4	.....	....	1	.....	.....	.....	....	.....	....	.....	.....	4
5	.82	.....	40.90	62.12	.76	100.	22.73	15.15	8.82	17.64	2.55	18.28	4.76	19.73	17.87	10.33

COLLEGIATE INSTITUTES

I. TABLE K—FIN-

Collegiate Institutes	Legislative Grants	Municipal Grants (county)	Municipal Grants (local)	Re-
	$ c.	$ c.	$ c.	
1 Barrie	1,103 93	2,727 22	6,859 96	
2 Kitchener (Berlin)	2,656 29	6,783 42	14,233 88	
3 Brantford	4,574 48	2,882 32	19,400 00	
4 Brockville	2,433 26	3,904 45	11,000 00	
5 Chatham	1,703 50	4,562 40	14,336 21	
6 Clinton	1,062 13	4,396 88	2,300 00	
7 Cobourg	1,205 62	3,675 19	5,950 00	
8 Collingwood	2,916 46	3,331 01	10,667 00	
9 Fort William	3,353 95	.....	16,937 03	
10 Galt	3,440 28	10,868 63	10,900 00	
11 Goderich	1,430 29	3,449 12	2,000 00	
12 Guelph	2,429 71	.....	14,847 57	
13 Hamilton	1,984 56	.....	55,214 80	
14 Ingersoll	1,215 02	2,077 32	5,162 57	
15 Kingston	1,491 84	.....	33,708 95	
16 Lindsay	1,949 52	6,698 51	10,809 47	
17 London	2,001 64	5,814 72	84,157 54	
18 Morrisburg	1,617 90	3,851 51	3,174 49	
19 Napanee	1,718 53	5,247 00	4,853 00	
20 Niagara Falls	1,319 02	1,809 79	18,458 00	
21 North Bay	2,039 86	.....	23,947 14	
22 Orillia	1,162 84	2,381 26	5,500 00	
23 Ottawa	3,752 75	.....	67,147 16	
24 Owen Sound	2,402 24	5,752 11	12,520 00	
25 Perth	1,558 24	3,990 18	5,879 78	
26 Peterborough	1,882 86	.....	23,200 00	
27 Picton	1,992 21	7,277 70	6,000 00	
28 Port Arthur	3,947 72	.....	17,500 00	
29 Renfrew	1,447 51	3,521 97	7,500 00	
30 Ridgetown	766 44	1,859 71	3,900 00	
31 St. Catharines	1,190 76	3,563 38	13,068 30	
32 St. Mary's	1,052 32	2,729 15	7,415 00	
33 St. Thomas	1,389 10	4,933 25	18,500 00	
34 Sarnia	1,279 50	2,228 28	12,319 10	
35 Seaforth	953 60	4,605 05	2,150 70	
36 Smith's Falls	3,028 38	1,292 74	11,566 38	
37 Stratford	2,893 32	5,304 06	21,163 81	
38 Strathroy	874 07	2,246 35	5,200 00	
39 Toronto, Harbord	1,538 08	.....	18,817 99	
40 Toronto, Humberside	1,323 90	.....	42,086 58	
41 Toronto, Jarvis	1,459 40	.....	43,989 13	
42 Toronto, Malvern Avenue	1,208 00	.....	33,488 95	
43 Toronto, Oakwood	1,157 30	.....	46,170 77	
44 Toronto, Parkdale	1,147 00	.....	41,362 25	
45 Toronto, Riverdale	1,253 64	.....	45,171 86	
46 Vankleek Hill	829 86	4,785 31	3,000 00	
47 Windsor	1,310 50	5,272 01	120,941 75	
48 Woodstock	4,041 09	6,270 40	11,000 00	
Totals	90,490 42	140,092 40	1,015,477 12	
High Schools				
1 Alexandria	733 05	733 05	5,221 15	
2 Alliston	538 58	1,328 96	1,500 00	
3 Almonte	681 58	1,339 18	3,077 70	
4 Amherstburg	668 19	1,441 20	2,019 02	
5 Arnprior	830 82	2,467 93	5,496 91	

AND HIGH SCHOOLS

ANCIAL STATEMENT

ceipts			Expenditure		
School Fees	Balances and other sources	Total Receipts	Teachers' Salaries	Buildings, Sites and all permanent improvements	Repairs to school acco - modation
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1 2,316 25	2,884 43	15,891 79	9,468 25	408 60	48 20
2 3,267 90	2,573 42	29,514,91	17,355 00	334 52	440 33
3 5,476 10	1,473 51	33,806 41	23,138 77	743 40	1,373 70
4 788 00	1,981 50	20,107 21	13,341 24	54 00	240 30
5 2,165 55	317 50	23,085 16	17,532 17	.....	1,148 33
6 1,401 50	2,319 80	11,480 31	7,530 00	1,701 33	60 87
7 781 50	4,852 55	16,464 86	9,518 00	188 64	163 81
8 644 00	2,510 69	20,069 16	13,350 00	23 65	389 85
9.....	69 05	20,360 03	15,767 00	761 50	190 11
10 3,910 50	3,134 63	32,254 04	21,149 29	315 49	244 21
11 1,701 35	4,280 62	12,861 38	9,576 00	.....	418 00
12 4,513 50	995 27	22,786 05	16,535 02	284 45	195 94
13 9,741 00	949 00	67,889 36	46,920 00	572 65	887 14
14 985 50	2,572 70	12,013 11	8,510 00	41 76	296 51
15 5,361 20	850 32	41,412 31	21,280 00	14,608 52	548 41
16 3,017 75	1,774 73	24,249 98	17,866 88	133 00	119 51
17 5,459 00	5,887 86	103,320 76	46,744 50	31,872 36	550 83
18.....	4,909 60	13,553 50	8,482 32	.....	101 46
19	6,317 78	18,136 31	10,293 75	74 46	51 12
20	3,820 16	25,406 97	13,315 00	.....	7,792 76
21	1,138 79	27,125 79	10,100 00	676 31	56 78
22 2,719 84	2,846 50	14,610 44	10,750 00	107 80	378 25
23 15,675 25	947 32	87,522 48	61,156 25	2,707 48	526 86
24 2,361 00	557 94	23,593 29	18,800 00	546 27	342 41
25 884 00	4,787 01	17,099 21	9,092 50	.....	34 81
26 2,306 75	484 63	27,874 24	21,343 87	202 41	.....
27	11,154 38	26,424 29	10,287 70	328 25	74 83
28	824 09	22,271 81	13,190 00	418 58	194 31
29 132 50	2,743 61	15,345 59	12,023 00	249 45	276 50
30 914 35	378 74	7,819 24	6,190 00	.....	149 09
31 1,615 25	241 75	19,679 44	16,347 08	71 80	128 87
32 1,731 00	584 51	13,511 98	9,350 00	936 19	659 52
33 1,011 00	1,930 55	27,763 90	22,360 37	851 90	582 96
34	1,309 39	17,136 27	12,322 56	.....	.....
35 1,320 40	3,044 61	12,074 36	6,815 00	.....	411 64
36 738 20	152 00	16,777 70	11,936 50	.....	174 45
37 3,046 00	1,159 00	33,566 19	21,734 55	.....	859 69
38 1,372 00	375 49	10,067 91	6,240 00	1,200 00	119 37
39 6,171 00	47,042 22	73,569 29	41,456 50	3,869 26	3,195 08
40 3,733 00	11,668 97	58,812 45	31,576 50	2,155 31	1,693 14
41 4,852 00	136,758 15	187,058 68	32,487 00	2,143 54	2,359 36
42 1,391 00	3,174 84	39,262 79	17,553 22	9,124 31	1,620 56
43 4,349 00	13,054 50	64,731 57	33,822 75	1,908 46	4,097 63
44 4,230 00	58,575 00	105,314 25	34,086 09	447 70	1,023 85
45 3,027 00	8,615 34	58,067 84	30,542 54	6,088 68	3,320 05
46 10 00	5,016 68	13,641 85	7,002 50	595 01	13 68
47 80 40	3,645 74	131,250 40	21,729 25	21,312 22	1,742 94
48 1,927 50	662 30	23,901 29	16,015 00	.....	1,156 62
117,129 04	377,349 17	1,740,538 15	893,983 92	108,059 26	40,454 64
1	1,705 36	8,392 61	5,500 00	148 27	35 54
2 683 00	621 74	4,672 28	3,400 00	.....	.....
3 1,022 00	909 40	7,029 86	4,500 00	665 80	.....
4 58 00	41 00	4,227 41	3,106 32	153 75	7 50
5	2,017 66	10,813 32	7,320 00	82 51	27 83

COLLEGIATE INSTITUTES

I. TABLE K—FIN-

Collegiate Institutes—Continued	Expenditure— Library, scientific apparatus, maps, etc., typewriters, drawing models and equipment for physical culture	Art, manual training, household science and agricultural department equipment	School books, stationery, prizes, fuel, examinations and all other expenses
	$ c.	$ c.	$ c.
1 Barrie	1,275 68	.....	3,010 44
2 Kitchener (Berlin)	364 79	319 33	5,760 59
3 Brantford	.....	.....	7,225 15
4 Brockville	211 33	.....	4,718 34
5 Chatham	237 25	571 49	3,469 05
6 Clinton	361 55	84 88	1,741 68
7 Cobourg	96 81	.....	1,551 23
8 Collingwood	548 94	887 30	4,134 23
9 Fort William	479 26	.....	3,162 16
10 Galt	468 47	9 45	8,641 87
11 Goderich	127 20	734 73	1,407 58
12 Guelph	203 84	.....	5,566 80
13 Hamilton	208 58	.....	8,010 29
14 Ingersoll	340 33	.....	2,790 36
15 Kingston	537 68	.....	3,985 17
16 Lindsay	144 21	201 42	3,232 59
17 London	944 15	261 76	21,046 76
18 Morrisburg	.....	891 91	1,119 34
19 Napanee	240 24	559 18	1,289 67
20 Niagara Falls	623 45	336 00	3,339 76
21 North Bay	71 71	.....	11,185 95
22 Orillia	100 00	.....	2,145 69
23 Ottawa	540 58	.....	22,519 16
24 Owen Sound	50 00	.....	3,854 61
25 Perth	120 64	500 00	3,345 90
26 Peterborough	150 00	25 00	5,406 74
27 Picton	417 43	83 45	4,048 58
28 Port Arthur	416 77	412 68	5,254 53
29 Renfrew	106 80	.....	2,689 84
30 Ridgetown	46 62	.....	1,433 53
31 St. Catharines	.....	94 69	3,021 42
32 St. Mary's	307 93	.....	2,039 48
33 St. Thomas	190 02	66 11	3,712 54
34 Sarnia	245 07	.....	2,298 43
35 Seaforth	167 34	.....	1,302 84
36 Smith's Falls	210 00	108 47	4,118 19
37 Stratford	770 25	.....	6,338 51
38 Strathroy	.....	.....	1,894 02
39 Toronto, Harbord	1,168 40	84 55	14,573 68
40 Toronto, Humberside	1,498 53	84 65	21,804 32
41 Toronto, Jarvis	1,692 82	84 55	13,202 67
42 Toronto, Malvern Avenue	1,329 77	84 55	9,550 38
43 Toronto, Oakwood	1,523 68	376 92	23,002 13
44 Toronto, Parkdale	1,097 54	84 55	9,999 52
45 Toronto, Riverdale	1,221 30	995 43	12,367 95
46 Vankleek Hill	79 68	.....	921 59
47 Windsor	515 11	11 50	5,458 81
48 Woodstock	.....	249 60	6,480 07
Totals	21,451 75	8,204 15	299,174 14
High Schools			
1 Alexandria	220 18	.....	1,089 66
2 Alliston	.....	.....	721 82
3 Almonte	.....	.....	514 12
4 Amherstburg	47 86	.....	362 31
5 Arnprior	48 21	.....	1,493 62

AND HIGH SCHOOLS—Continued

ANCIAL STATEMENT—Continued

Continued

	Total Expenditure	Balances	Charges per year for Tuition
	$ c.	$ c.	
1	14,211 17	1,680 62	$10.
2	24,574 56	4,940 35	Res. $10; non-res. $15.
3	32,481 02	1,325 39	Res. and Co. $10; others $30.
4	18,565 21	1,542 00	$5.
5	22,958 29	126 87	Res. 1st yr. free, thereafter $6; all others $10.
6	11,480 31	.....	Lower school $6; others $10.
7	11,518 49	4,946 37	Res. free.
8	19,333 97	735 19	Res. free; non-res. $10.
9	20,360 03	.....	Free.
10	30,828 78	1,425 26	Co. $10; res. and other Cos. $14.
11	12,263 51	597 87	F. I $6; F. II $8; F's III and IV $10.
12	22,786 05	.....	Res. free; non-res. $20.
13	56,598 66	11,290 70	Res. 1st yr. $2.50, thereafter $10; Wentworth Co. $40;
14	11,978 96	34 15	Res. F. I free; all others $7.50. [others $55.
15	40,959 78	452 53	Res. 1st yr. free, other yrs. $10 to $30; non-res. $30 to $35.
16	21,697 61	2,552 37	Res. $7.50 to $10; non-res. $7.50 to $20.
17	101,420 36	1,900 40	Res. 1st yr. free; other yrs. $10; outside Co. $30.
18	10,595 03	2,958 47	Free.
19	12,508 42	5,627 89	Free.
20	25,406 97	.....	Free.
21	22,090 75	5,035 04	Free.
22	13,481 74	1,128 70	$10.
23	87,450 33	72 15	Res. $10 to $25; non-res. $45 to $50.
24	23,593 29	.....	Res. F's I free, II, $8, III & IV, $12; non-res. $10.
25	13,093 85	4,065 36	Res. free; non-res. $10.
26	27,128 02	746 22	Res. L. Sch. $5, M. $8, U. $10; non-res. $25.
27	15,240 24	11,184 05	Free.
28	19,886 87	2,384 94	Free.
29	15,345 59	.....	Res. and Co. free; others $25.
30	7,819 24	.....	Res. $6; Co. and others $10.
31	19,663,86	15 58	$5.
32	13,293 12	218 86	Res. 1st yr. in F. I $5; all others $10.
33	27,763 90	.....	Res. free; non-res. $10.
34	14,866 06	2,270 21	Free.
35	8,696 82	3,377 54	F. I $6, II, $8; others $10.
36	16,547 61	230 09	Res. free; non-res. $10.
37	29,703 00	3,863 19	Res. 1st yr. free; all others $10.
38	9,453 39	614 52	Res. 1st yr. free; all others $10.
39	64,347 47	9,221 82	
40	58,812 45	.....	
41	51,969 94	135,088 74	
42	39,262 79	.....	Res. F. I, free, II $9, III, $15, IV, $21, V, $27; non-res.
43	64,731 57	.....	I, $6, II, $15, III, $15, IV. $21, V, $27.
44	46,739 25	58,575 00	
45	54,535 95	3,531 89	
46	8,612 46	5,029 39	Province free; others $20.
47	50,769 83	80,480 57	Free to res. and county.
48	23,901 29	.....	Res. 1st yr. free; all others $7.50.
	1,371,327 86	369,210 29	17 free; 31 not free.
1	6,993 65	1,398 96	Free.
2	4,121 82	550 46	Res. $5; non-res. $10.
3	5,679 92	1,349 94	Res. $2.50; non-res. $12.50.
4	3,677 74	549 67	Res. free; non-res. $10.
5	8,972 17	1,841 15	Free.

COLLEGIATE INSTITUTES AND

I. TABLE K—FINANCIAL

Re-

High Schools—Continued	Legislative Grants	Municipal Grants (county)	Municipal Grants (local)
	$ c.	$ c.	$ c.
6 Arthur	719 55	1,191 87	1,381 90
7 Athens	1,456 17	4,654 04	3,600 00
8 Aurora	676 87	1,910 78	2,500 00
9 Avonmore	454 95	454 95	3,672 00
10 Aylmer	788 59	3,198 74	2,230 16
11 Beamsville	372 41	2,250 00	2,288 05
12 Belleville	1,356 56	3,607 68	13,202 72
13 Bowmanville	885 33	2,269 84	3,830 00
14 Bradford	583 42	1,851 10	1,000 00
15 Brampton	893 07	3,316 00	3,700 00
16 Brighton	441 52	1,299 33	1,300 00
17 Caledonia	609 66	2,661 49	1,500 00
18 Campbellford	631 12	1,854 42	3,780 33
19 Carleton Place	591 59	2,563 99	2,100 00
20 Cayuga	584 91	5,895 17	4,000 00
21 Chatsworth	425 17	721 65	2,026 43
22 Chesley	723 78	2,119 98	2,470 00
23 Chesterville	509 66	943 00	3,035 50
24 Colborne	489 47	1,088 63	1,482 00
25 Cornwall	2,862 84	5,891 40	10,620 00
26 Deseronto	607 37	607 37	3,050 00
27 Dundalk	422 01	422 01	600 00
28 Dundas	676 79	1,396 41	4,100 00
29 Dunnville	789 25	3,711 32	4,799 65
30 Durham	536 62	1,194 36	16,185 67
31 Dutton	1,283 97	4,056 43	500 00
32 Elora	514 20	939 58	2,000 00
33 Essex	1,953 91	3,913 72	2,500 00
34 Fergus	527 26	1,738 39	1,900 00
35 Flesherton	536 71	536 21	2,250 80
36 Forest	662 10	2,095 79	1,500 00
37 Gananoque	717 55	1,790 84	3,253 20
38 Georgetown	693 51	1,921 22	2,416 26
39 Glencoe	576 72	1,563 13	600 00
40 Gravenhurst	1,159 18	.....	2,225 00
41 Grimsby	600 31	1,796 70	2,235 11
42 Hagersville	593 34	2,266 55	1,850 00
43 Haileybury	6,429 04	.....	4,915 00
44 Harriston	680 26	1,753 16	2,540 51
45 Hawkesbury	485 66	2,126 55	1,179 14
46 Iroquois	641 77	3,165 29	2,000 00
47 Kemptville	734 22	3,530 71	2,400 00
48 Kenora	1,409 68	.....	7,331 59
49 Kincardine	805 54	2,486 65	2,661 43
50 Leamington	779 99	3,067 94	4,500 00
51 Listowel	708 14	3,086 55	3,000 00
52 Lucan	575 72	2,232 70	1,000 00
53 Madoc	651 41	3,530 78	1,300 00
54 Markdale	1,196 07	1,173 16	1,689 71
55 Markham	665 99	3,006 55	850 00
56 Meaford	989 30	2,641 97	4,000 00
57 Midland	811 98	1,117 55	4,000 00
58 Mitchell	595 45	1,893 95	2,200 00
59 Morewood	471 49	471 49	3,129 92
60 Mount Forest	679 99	1,434 36	3,500 00
61 Newburgh	490 62	2,700 00	2,475 00
62 Newcastle	431 30	431 30	1,823 55
63 Newmarket	1,627 32	4,285 81	2,800 00
64 Niagara	443 95	1,635 00	1,000 00

HIGH SCHOOLS—Continued

STATEMENT—Continued

	ceipts			Expenditure		
	School Fees	Balances and other sources	Total Receipts	Teachers' Salaries	Buildings, Sites and all permanent improvements	Repairs to school accommodation
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
6	810 58	458 09	4,562 26	3,300 00	5 50	46 40
7	513 00	4,486 02	14,709 23	7,121 60	414 14	89 75
8	1,018 00	2,636 38	8,742 03	4,720 00	.....	471 75
9	.....	1,238 99	5,820 89	2,680 00	122 05	48 50
10	1,003 00	248 87	7,469 36	6,195 00	7 50	76 23
11	.....	449 87	5,360 33	3,030 00	506 50	36 02
12	.....	251 93	18,418 89	14,603 17	908 51	.....
13	288 15	176 21	7,449 53	4,996 12	711 63	207 25
14	482 50	94 56	4,011 58	3,210 00	.....	137 67
15	1,395 00	1,304 22	10,608 29	8,295 00	.....	55 76
16	.....	948 85	3,989 70	2,640 00	24 00	.....
17	561 24	3,785 70	9,118 09	4,610 00	.....	85 70
18	46 00	492 03	6,803 90	5,170 04	.....	6 23
19	560 00	906 29	6,721 87	4,665 00	680 86	200 50
20	.....	362 14	10,842 22	3,710 00	2,137 82	42 81
21	285 75	1,436 91	4,895 91	2,475 00	.....	13 14
22	1,052 00	723 43	7,089 19	4,983 22	1,020 00	.....
23	.....	60 00	4,548 16	3,050 75	242 10	159 14
24	.....	2,505 94	5,566 04	2,458 34	16 42	25 59
25	.....	3,545 08	22,919 32	12,709 55	146 20	137 09
26	21 50	67 41	4,353 65	3,219 43	.....	152 69
27	546 60	922 93	2,913 55	2,225 00	.....	2 95
28	742 00	1,063 24	7,978 44	5,800 00	14 79	103 40
29	.....	3,434 30	12,734 52	6,620 00	719 97	86 28
30	984 45	2 57	18,903 67	3,300 00	9,228 52	.....
31	864 00	2,637 36	9,341 76	5,730 01	492 17	.....
32	517 50	255 28	4,226 56	3,210 00	.....	92 61
33	.....	2,187 97	10,555 60	6,905 00	.....	1,122 05
34	530 50	2,733 36	7,429 51	4,230 00	.....	100 83
35	324 25	498 86	4,146 83	2,825 00	.....	86 25
36	.....	1,554 58	5,812 47	3,750 00	197 67	.....
37	139 00	180 78	6,081 37	4,600 00	297 66	.....
38	1,388 25	14 58	6,433 82	5,072 45	262 62	.....
39	785 00	603 53	4,128 38	2,860 00	.....	43 34
40	299 25	17 89	3,701 32	2,825 00	.....	18 92
41	.....	231 87	4,863 99	3,500 00	.....	76 13
42	.....	459 86	5,169 75	3,650 00	65 85	359 15
43	1,716 00	16,643 15	29,703 19	6,550 00	154 35	34 08
44	856 00	416 38	6,246 31	4,945 64	.....	152 64
45	.....	.....	3,791 35	2,595 92	316 10	.....
46	.....	2,296 03	8,103 09	5,200 00	114 55	.....
47	536 00	1,197 98	8,398 91	5,750 00	.....	97 62
48	.....	.....	8,741 27	4,428 55	1,917 94	.....
49	1,510 50	1,174 90	8,639 02	6,210 00	.....	26 00
50	.....	340 77	8,688 70	6,673 35	.....	180 38
51	1,687 25	134 40	8,616 34	6,290 00	.....	170 14
52	894 00	447 50	5,149 92	4,210 00	.....	285 88
53	.....	1,132 30	6,614 49	4,439 50	.....	275 07
54	417 50	1,203 20	5,679 64	3,270 71	52 00	70 18
55	1,166 00	668 18	6,356 72	4,750 00	97 51	259 08
56	1,026 00	591 39	9,248 66	6,933 30	.....	.....
57	693 50	918 45	7,541 48	5,350 00	.....	125 18
58	784 50	220 01	5,693 91	4,530 00	.....	260 45
59	54 00	562 08	4,688 98	2,560 00	.....	8 15
60	882 00	510 98	7,007 33	4,570 02	1,057 10	52 95
61	10 00	1,361 33	7,036 95	3,000 00	1,818 54	207 77
62	.....	20 00	2,706 15	2,000 00	162 50	55 64
63	1,591 00	900 96	11,205 09	8,150 00	174 30	615 51
64	.....	256 96	3,335 91	2,040 00	.....	.....

COLLEGIATE INSTITUTES AND
I. TABLE K—FINANCIAL

High Schools—Continued	Expenditure— Library, scientific apparatus, maps, etc., typewriters, drawing models and equipment for physical culture	Art, manual training, household science and agricultural department equipment	School books, stationery, prizes, fuel, examinations and all other expenses
	$ c.	$ c.	$ c.
6 Arthur	48 26	95 96	1,046 05
7 Athens	87 28	700 00	1,702 98
8 Aurora	.....	.....	1,264 59
9 Avonmore	6 25	.....	1,798 86
10 Aylmer	69 91	.....	1,120 72
11 Beamsville	53 00	.....	1,687 52
12 Belleville	37 22	423 01	2,446 98
13 Bowmanville	43 88	55 41	1,422 85
14 Bradford	.....	.....	638 17
15 Brampton	.....	.....	1,449 45
16 Brighton	37 00	.....	1,288 70
17 Caledonia	88 35	.....	720 26
18 Campbellford	147 33	.....	1,004 55
19 Carleton Place	107 60	.....	917 08
20 Cayuga	64 15	.....	2,729 30
21 Chatsworth	6 00	.....	1,457 28
22 Chesley	177 85	.....	271 98
23 Chesterville	.....	.....	826 69
24 Colborne	38 50	.....	638 67
25 Cornwall	128 45	.....	4,005 54
26 Deseronto	.....	.....	950 80
27 Dundalk	81 39	.....	416 57
28 Dundas	95 00	.....	1,875 70
29 Dunnville	91 43	15 00	1,256 44
30 Durham	.....	.....	1,182 53
31 Dutton	.....	715 65	653 68
32 Elora	36 02	.....	573 98
33 Essex	18 75	258 79	533 44
34 Fergus	42 75	.....	838 17
35 Flesherton	81 18	.....	611 10
36 Forest	36 10	.....	684 90
37 Gananoque	145 61	.....	1,038 10
38 Georgetown	171 77	.....	926 98
39 Glencoe	.....	.....	672 27
40 Gravenhurst	11 40	.....	783 88
41 Grimsby	13 45	.....	1,047 78
42 Hagersville	58 35	61 10	799 59
43 Haileybury	881 72	98 00	2,511 28
44 Harriston	29 86	.....	1,034 60
45 Hawkesbury	69 31	.....	810 02
46 Iroquois	59 80	.....	880 13
47 Kemptville	118 13	.....	890 64
48 Kenora	50 00	.....	2,344 78
49 Kincardine	24 54	.....	1,232 14
50 Leamington	116 13	.....	1,334 40
51 Listowel	385 93	.....	1,669 94
52 Lucan	.....	.....	654 04
53 Madoc	187 59	.....	904 63
54 Markdale	40 50	1,021 46	1,013 28
55 Markham	114 12	4 15	811 58
56 Meaford	64 38	.....	1,411 88
57 Midland	112 54	.....	1,238 22
58 Mitchell	.....	.....	774 16
59 Morewood	.....	.....	586 85
60 Mount Forest	.....	.....	1,020 83
61 Newburgh	36 45	.....	550 58
62 Newcastle	35 15	.....	452 86
63 Newmarket	112 70	535 05	1,617 53
64 Niagara	113 53	.....	400 91

HIGH SCHOOLS—Continued

STATEMENT—Continued

Continued	Total Expenditure	Balances	Charges per year for Tuition
	$ c.	$ c.	
6	4,542 17	20 09	$10.
7	10,115 75	4,593 48	Res. free; Co. $5; others $30.
8	6,456 34	2,285 69	$10.
9	4,655 66	1,165 23	Free.
10	7,469 36	.....	Res. F. I $5; all others $10.
11	5,313 04	47 29	Free.
12	18,418 89	.....	Free.
13	7,437 14	12 39	Co. free; res. F. I free, II $6; all others $7.50.
14	3,985 84	25 74	F. I free; all others $10.
15	9,800 21	808 08	$10.
16	3,989 70	.....	Free.
17	5,504 31	3,613 78	Co. free; other Cos. $4.50.
18	6,328 15	475 75	Free.
19	6,571 04	150 83	Res. free; non-res. $10.
20	8,684 08	2,158 14	Free.
21	3,951 42	944 49	Res. F. I free; all others $10.
22	6,453 05	636 14	L. Sch. $10; M. and U. $15.
23	4,278 68	269 48	Free.
24	3,177 52	2,388 52	Free.
25	17,126 83	5,792 49	Free.
26	4,322 92	30 73	Free.
27	2,725 91	187 64	$10.
28	7,888 89	89 55	Res. 1st yr. free; all others $10.
29	8,789 12	3,945 40	Free.
30	13,711 05	5,192 62	Res. $7.50; non-res. $10.
31	7,591 51	1,750 25	$10.
32	3,912 61	313 95	Res. $5; non-res. $10.
33	8,838 03	1,717 57	Free.
34	5,211 75	2,217 76	Res. free; non-res. $10.
35	3,603 53	543 30	Res. F. I free, II $5, III $7.50; non-res. $10.
36	4,668 67	1,143 80	Free.
37	6,081 37	.....	Res. free; non-res. $5.
38	6,433 82	.....	$10.
39	3,575 61	552 77	$10.
40	3,639 20	62 12	First yr. $5; other years $10.
41	4,637 36	226 63	Free.
42	4,994 04	175 71	Free.
43	10,229 43	19,473 76	Res. free; non-res. $30.
44	6,162 74	83 57	Res. 1st yr. free; all others $10.
45	3,791 35	.....	Free.
46	6,254 48	1,848 61	Free.
47	6,856 39	1,542 52	Res. free; Co. & adjoining Cos. $5; others $25.
48	8,741 27	.....	Free.
49	7,492 68	1,146 34	Res. $8; non-res. $10.
50	8,304 26	384 44	Free.
51	8,516 01	100 33	Res. 1st yr. $7; all others $10.
52	5,149 92	.....	$10.
53	5,806 79	807 70	Free.
54	5,468 13	211 51	$10.
55	6,036 44	320 28	$10.
56	8,409 56	839 10	Res. F. I. $5; others $8; non-res $10.
57	6,825 94	715 54	Res. $5; non-res. $10.
58	5,564 61	129 30	Res. $6; non-res. $10.
59	3,155 00	1,533 98	Free.
60	6,700 90	306 43	Res. F. I free; all others $10.
61	5,613 34	1,423 61	Res. & Co. free; others $10.
62	2,706 15	.....	Free.
63	11,205 09	.....	$10.
64	2,554 44	781 47	Free.

COLLEGIATE INSTITUTES

I. TABLE K—FINANCIAL

	High Schools—Continued	Legislative Grants	Municipal Grants (county)	Municipal Grants (local)	Re-
		$ c.	$ c.	$ c.	
65	Niagara Falls South	960 38	161 25	20,214 99	
66	Norwood	1,226 94	1,840 83	1,695 53	
67	Oakville	1,703 53	1,066 62	2,895 05	
68	Omemee	423 73	654 03	1,202 53	
69	Orangeville	849 44	2,238 46	3,200 00	
70	Oshawa	995 69	2,139 85	6,750 72	
71	Paris	1,411 12	2,428 39	3,600 00	
72	Parkhill	583 67	1,675 26	1,800 00	
73	Parry Sound	1,106 50	.....	3,500 00	
74	Pembroke	1,751 82	1,853 08	9,361 17	
75	Penetanguishene	675 14	675 14	3,050 00	
76	Petrolea	1,280 74	3,815 35	2,800 00	
77	Plantagenet	456 03	1,352 56	1,700 00	
78	Port Dover	433 47	569 18	2,081 94	
79	Port Elgin	518 28	1,338 30	1,250 00	
80	Port Hope	1,697 88	3,924 15	3,858 11	
81	Port Perry	599 19	2,578 98	2,005 81	
82	Port Rowan	423 59	1,079 98	1,552 55	
83	Prescott	719 76	719 40	5,264 91	
84	Richmond Hill	598 80	2,430 38	800 00	
85	Rockland	570 18	2,701 62	1,006 75	
86	Sault Ste. Marie	3,626 97	.....	11,901 54	
87	Shelburne	637 72	1,300 22	800 00	
88	Simcoe	845 27	4,249 99	5,225 36	
89	Smithville	508 80	1,904 97	1,574 85	
90	Stirling	2,079 83	3,272 70	1,340 17	
91	Streetsville	540 14	2,196 38	650 00	
92	Sudbury	1,933 98	.....	8,000 00	
93	Sydenham	1,720 58	5,126 00	.....	
94	Thorold	529 34	.....	3,100 00	
95	Tillsonburg	717 84	1,972 09	3,500 00	
96	Toronto, Commerce and Finance	1,957 51	.....	265,779 82	
97	Toronto, North	943 03	.....	20,587 52	
98	Trenton	599 26	1,166 77	4,000 00	
99	Uxbridge	586 40	2,989;55	1,200 00	
100	Vienna	411 16	856 16	700 00	
101	Walkerton	1,399 73	1,798 06	2,600 00	
102	Wardsville	409 16	741 87	.....	
103	Waterdown	467 88	947 64	3,453 00	
104	Waterford	570 07	2,045 86	1,500 00	
105	Watford	673 41	3,618 13	1,800 00	
106	Welland	1,395 26	4,110 40	14,018 87	
107	Weston	765 21	2,707 64	1,750 00	
108	Whitby	1,293 88	2,282 20	13,200 00	
109	Wiarton	561 38	1,974 15	1,500 00	
110	Williamstown	779 87	1,645 09	2,601 79	
111	Winchester	468 27	659 09	5,500 00	
112	Wingham	811 10	3,420 57	2,784 23	
1	Totals, High Schools	100,883 48	219,004 22	657,952 62	
2	Totals, Collegiate Institutes	90,490 42	140,092 40	1,015,477 12	
3	Grand Totals, 1915	191,373 90	359,096 62	1,673,429 74	
4	Grand Totals, 1914	260,954 79	358,137 66	2,870,898 56	
5	Increases	.....	958 96	.....	
6	Decreases	69,580 89	.....	1,197,468 82	
7	Percentages	6.36	11.94	55.63	

AND HIGH SCHOOLS—Continued

STATEMENT—Continued

ceipts			Expenditure		
School Fees	Balances and other sources	Total Receipts	Teachers' Salaries	Buildings, Sites and all permanent improvements	Repairs to school accommodation
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
65	2,296 75	23,633 37	5,163 22	10,560 35	510 38
66 500 00	1,339 96	6,603 26	4,302 44	.....	14 14
67 562 00	61 00	6,288 20	3,870 00	368 58	8 75
68 113 25	142 34	2,535 88	2,050 00	.....	.....
69 1,618 40	553 79	8,460 09	6,586 45	.....	213 76
70 110 00	810 39	10,806 65	8,540 00	62 91	185 98
71 103 07	1,465 05	9,007 63	6,020 00	431 72	126 61
72 905 25	182 39	5,146 57	3,920 00	.....	206 46
73 179 75	656 21	5,442 46	3,660 00	830 50	.....
74	227 05	13,193 12	9,150 00	105 05	217 51
75	989 17	5,389 45	3,650 00	.....	56 19
76	3,991 08	11,887 17	6,383 32	42 42	262 99
77	1,191 34	4,699 93	2,840 00	200 00	.....
78 25 00	.....	3,109 59	2,200 00	.....	.....
79 485 00	759 31	4,350 89	3,000 00	.....	.....
80 841 50	909 86	11,231 50	9,637 97	45 50	131 73
81 264 88	190 25	5,639 11	4,700 00	.....	33 57
82	24 00	3,080 12	2,205 65	450 55	65 62
83 95 00	235 79	7,034 86	5,235 00	219 46	197 41
84 851 00	87 00	4,767 18	3,240 00	.....	133 68
85	323 47	4,602 02	3,050 00	.....	36 81
86 2,160 00	3,100 32	20,788 83	14,660 00	38 15	157 67
87 731 00	75 32	3,544 26	2,626 06	184 33	102 55
88 170 11	133 56	10,624 29	7,540 00	1,535 25	19 22
89	2,868 29	6,856 91	2,926 50	234 94	.....
90	1,029 42	7,722 12	5,058 21	131 34	280 55
91 511 00	1,076 90	4,974 42	3,550 00	.....	14 50
92 132 00	6,477 37	16,543 35	9,880 00	234 75	437 31
93 538 00	1,111 26	8,495 84	5,965 00	305 18	200 00
94	462 65	4,091 99	3,260 00	86 40	46 30
95 903 00	359 76	7,452 69	5,876 23	40 98	18 40
96 3,528 25	27,418 57	298,684 15	35,502 75	215,847 32	287 56
97 1,105 00	48,895 78	71,531 33	11,542 50	46,324 14	558 78
98.....	3,185 43	8,951 46	4,479 95	.....	381 90
99 813 25	765 68	6,354 88	4,354 73	243 25	80 57
100	1,456 39	3,423 71	1,810 00	62 80	.....
101 747 00	2,642 98	9,187 77	6,110 92	14 00	41 40
102 345 90	979 60	2,476 53	1,850 68	.....	21 55
103 538 00	1,039 80	6,446 32	3,000 00	411 75	199 17
104	624 39	4,740 32	3,292 76	.....	103 84
105 359 00	2,891 69	9,342 23	4,670 00	.....	578 25
106	23,307 62	42,832 15	6,960 00	25,842 94	213 62
107 1,062 00	2,482 95	8,767 80	5,990 00	345 23	190 89
108 263 25	2,940 33	19,979 66	5,941 89	9,799 94	.....
109 390 50	746 12	5,172 15	3,350 00	46 38	32 68
110	2,438 48	7,465 23	5,077 50	150 00	14 00
111	1,520 61	8,147 97	4,068 00	499 75	855 10
112 1,218 50	802 19	9,036 59	6,723 86	95 85	65 90
1 52 914 90	236,539 65	1,267,294 87	578,689 58	340,929 41	14,335 02
2 117,129 04	377,349 17	1,740,538 15	893,983 92	108,059 26	40,454 64
3 170,043 94	613,888 82	3,007,833 02	1,472,673 50	448,988 67	54,789 66
4 163,279 84	878,263 63	4,531,534 48	1,476,755 93	1,335,307 78	57,081 57
5 6,764 10	.....	.....	.....	.....	.....
6	264,374 81	1,523,701 46	4,082 43	886,319 11	2,291 91
7 5.65	20.41	.....	59.6	18.17	2.22

COLLEGIATE INSTITUTES

I. TABLE K—FINANCIAL

High Schools—Concluded	Expenditure— Library, scientific apparatus, maps, etc., typewriters, drawing models and equipment for physical culture	Art, manual training, household science and agricultural department equipment	School books, stationery, prizes, fuel, examinations and all other expenses
	$ c.	$ c.	$ c.
65 Niagara Falls South	1,193 91	207 48	3,209 26
66 Norwood	.....	185 93	1,207 77
67 Oakville	186 35	9 20	1,845 32
68 Omemee	29 47	.....	431 30
69 Orangeville	66 95	.....	1,299 26
70 Oshawa	291 44	.....	1,726 32
71 Paris	75 52	545 18	944 58
72 Parkhill	.....	.....	859 49
73 Parry Sound	.....	.....	870 95
74 Pembroke	36 27	.....	3,188 22
75 Penetanguishene	50 50	.....	1,296 29
76 Petrolea	93 95	10 25	1,692 34
77 Plantagenet	.....	.....	499 23
78 Port Dover	191 95	.....	717 64
79 Port Elgin	29 33	.....	1,060 78
80 Port Hope	54 00	43 50	1,318 80
81 Port Perry	109 13	.....	778 25
82 Port Rowan	54 67	.....	303 63
83 Prescott	109 64	.....	1,218 32
84 Richmond Hill	122 48	.....	1,089 44
85 Rockland	.....	.....	615 29
86 Sault Ste. Marie	419 04	927 01	4,309 59
87 Shelburne	9 35	.....	515 11
88 Simcoe	273 35	.....	1,256 47
89 Smithville	.....	.....	526 74
90 Stirling	.....	.....	1,084 86
91 Streetsville	55 87	.....	406 54
92 Sudbury	7 10	.....	2,545 13
93 Sydenham	.....	450 00	1,017 36
94 Thorold	32 93	.....	632 21
95 Tillsonburg	23 73	.....	1,437 37
96 Toronto, Commerce and Finance	289 84	33 95	5,599 49
97 Toronto, North	1,457 57	84 55	8,701 64
98 Trenton	37 40	.....	1,041 58
99 Uxbridge	65 58	.....	928 24
100 Vienna	44 66	.....	93 64
101 Walkerton	112 99	611 50	1,293 68
102 Wardsville	58 94	.....	317 32
103 Waterdown	35 00	.....	2,800 40
104 Waterford	.....	.....	896 54
105 Watford	.....	.....	1,376 51
106 Welland	.....	1,708 41	2,745 87
107 Weston	.....	478 10	1,340 34
108 Whitby	65 87	672 70	1,301 80
109 Wiarton	44 50	.....	842 65
110 Williamstown	29 06	.....	1,253 02
111 Winchester	273 65	58 43	1,474 67
112 Wingham	61 97	.....	1,173 35
1 Totals, High Schools	10,986 82	10,009 77	144,695 54
2 Totals, Collegiate Institutes	21,451 75	8,204 15	299,174 14
3 Grand Totals, 1915	32,438 57	18,213 92	443,869 68
4 Grand Totals, 1914	41,465 42	34,082 24	500,247 14
5 Increases	.....	.....	.....
6 Decreases	9,026 85	15,868 32	56,377 46
7 Percentages	1.31	.73	17.96

AND HIGH SCHOOLS—Continued
STATEMENT—Concluded

	Concluded: Total Expenditure	Balances	Charges per year for Tuition
	$ c.	$ c.	
65	20,844 60	2,788 77	Free.
66	5,710 28	892 98	$6
67	6,288 20	.....	Res. $5; non-res. 1st yr. $5, thereafter $8.
68	2,510 77	25 11	Res. free; non-res. $10.
69	8,166 42	293 67	$10.
70	10,806 65	.....	Res. free; non-res. 1st yr. free, thereafter $7.50.
71	8,143 61	864 02	Res. and Co. free; others $20.
72	4,985 95	160 62	Res. F"s. I and II $6, F"s. III and IV $8; non-res. $10.
73	5,361 45	81 01	Res. free; non-res. $10.
74	12,697 05	496 07	Free.
75	5,052 98	336 47	Free.
76	8,485 27	3,401 90	Free.
77	3,539 23	1,160 70	Free.
78	3,109 59	.....	Free.
79	4,090 11	260 78	$6.50
80	11,231 50	.....	Res. $9; Co. free.
81	5,620 95	18 16	F. I free; others $7.50.
82	3,080 12	.....	Free.
83	6,979 83	55 03	Res free; non-res $5.
84	4,585 60	181 58	$10.
85	3,702 10	899 92	Free.
86	20,511 46	277 37	$10.
87	3,437 40	106 86	Res. 1st yr. free; all others $10.
88	10,624 29	.....	Res. free; non-res. $10.
89	3,688 18	3,168 73	Free.
90	6,554 96	1,167 16	Free.
91	4,026 91	947 51	$10.
92	13,104 29	3,439 06	Res. free; non-res. $10.
93	7,937 54	558 30	L. and M. Schs. $5; U. Sch. $12.
94	4,057 84	34 15	Free.
95	7,396 71	55 98	L. & M. Schs. $7.50; U. $10.
96	257,560 91	41,123 24	1st and 2nd yrs. free; others $15.
97	68,669 18	2,862 15	Res. I free, II $9, III $15, IV $21, V $27; non-res. $6,
98	5,940 83	3,010 63	Free. [$15, $15, $21, $27.
99	5,672 37	682 51	Res. $5; non-res. $7.50.
100	2,011 10	1,412 61	Free.
101	8,184 49	1,003 28	Res. F. I free; all others $10.
102	2,248 49	228 04	$7.50.
103	6,446 32	.....	$10.
104	4,293 14	447 18	Free.
105	6,624 76	2,717 47	Res. $10; non-res. free.
106	37,470 84	5,361 31	Free.
107	8,344 56	423 24	$10.
108	17,782 20	2,197 46	Res. $6; Co. $7.50; others $9.
109	4,316 21	855 94	$6.
110	6,523 58	941 65	Free.
111	7,229 60	918 37	Free.
112	8,120 93	915 66	L. Sch. $6: M. $8; U. $10.
1	1,099,646 14	167,648 73	58 free; 54 not free.
2	1,371,327 86	369,210 29	17 free; 31 not free.
3	2,470,974 00	536,859 02	75 free; 85 not free.
4	3,444,940 08	1,086,594 40	73 free; 88 not free.
5	.....	.....	2 free.
6	973,966 08	549,735 38	3 not free.
7	.....	.....	46.87 free; 53.12 not free.

Cost per pupil, enrolled attendance, $64.30; average attendance, $99.53.

COLLEGIATE INSTITUTES
II. TABLE L—ATTENDANCE, PUPILS IN THE SCHOOLS

Collegiate Institutes	Pupils				Number of Pupils in—			Number of Pupils from—		
	Boys	Girls	Totals	Average Daily Attendance	Lower School	Middle School	Upper School	Municipalities forming High School District	Municipalities within the County or Territorial District	Other Counties or Districts
1 Barrie	142	179	321	218	178	118	25	172	145	4
2 Kitchener (Berlin)	200	168	368	240	237	107	24	295	72	1
3 Brantford	370	344	714	438	424	242	48	536	160	18
4 Brockville	177	204	381	230	236	112	33	264	117	....
5 Chatham	207	234	441	271	268	119	54	291	139	11
6 Clinton	111	133	244	168	152	57	35	94	150	....
7 Cobourg	112	132	244	152	188	37	19	150	93	1
8 Collingwood	130	180	310	205	202	84	24	222	68	20
9 Fort William	144	204	348	233	250	79	19	338	9	1
10 Galt	238	230	468	305	336	87	45	230	204	34
11 Goderich	99	192	291	185	182	86	23	169	113	9
12 Guelph	253	285	538	328	336	146	56	391	123	24
13 Hamilton	595	567	1,162	750	621	410	131	1,027	95	40
14 Ingersoll	112	122	234	148	147	78	9	118	91	25
15 Kingston	280	328	608	397	343	239	26	520	85	3
16 Lindsay	199	274	473	316	301	117	55	225	177	71
17 London	611	640	1,251	812	895	263	93	1,044	204	3
18 Morrisburg	59	72	131	89	79	42	10	66	58	7
19 Napanee	108	162	270	174	158	93	19	126	136	8
20 Niagara Falls	155	159	314	211	216	79	19	256	44	14
21 North Bay	128	155	283	169	205	70	8	232	28	23
22 Orillia	169	217	386	241	240	121	25	248	78	60
23 Ottawa	840	536	1,376	845	861	452	63	1,228	88	60
24 Owen Sound	211	245	456	299	247	158	51	278	147	31
25 Perth	108	117	225	154	135	63	27	108	112	5
26 Peterborough	223	272	495	337	328	115	52	423	51	21
27 Picton	117	157	274	174	212	42	20	118	153	3
28 Port Arthur	111	110	221	145	181	32	8	221	.....	....
29 Renfrew	168	236	404	245	284	94	26	140	248	16
30 Ridgetown	80	112	192	133	142	32	18	109	77	6
31 St. Catharines	228	251	479	295	371	78	30	327	143	9
32 St. Mary's	115	137	252	173	153	67	32	125	73	54
33 St. Thomas	224	335	559	358	407	123	29	401	150	8
34 Sarnia	176	215	391	251	270	99	22	323	65	3
35 Seaforth	93	117	210	157	130	37	43	105	86	19
36 Smith's Falls	135	210	345	226	209	110	26	236	44	65
37 Stratford	284	285	569	407	363	143	63	413	111	45
38 Strathroy	107	109	216	155	112	87	17	121	94	1
39 Toronto, Harbord	443	432	875	576	464	330	81	875	.....	....
40 Toronto, Humberside	307	346	653	426	405	189	59	565	71	17
41 Toronto, Jarvis	368	304	672	437	392	214	66	650	3	19
42 Toronto, Malvern Avenue	127	156	283	176	189	74	20	204	76	3
43 Toronto, Oakwood	280	401	681	458	383	240	58	649	32	....
44 Toronto, Parkdale	310	371	681	452	392	244	45	619	34	28
45 Toronto, Riverdale	285	292	577	361	393	137	47	555	16	6
46 Vankleek Hill	91	150	241	152	177	42	22	86	119	36
47 Windsor	314	274	588	362	448	103	37	427	158	3
48 Woodstock	207	279	486	298	317	113	56	245	200	41
Totals	10,551	11,630	22,181	14,332	14,159	6,204	1,818	16,565	4,740	876
High Schools										
1 Alexandria	62	96	158	96	124	34	.....	140	10	8
2 Alliston	55	77	132	79	96	36	.....	58	65	9
3 Almonte	63	75	138	90	83	44	11	78	55	5
4 Amherstburg	40	30	70	44	49	21	.....	48	22	....
5 Arnprior	95	134	229	151	140	78	11	133	69	27

AND HIGH SCHOOLS—Continued
AND IN THE VARIOUS SUBJECTS, ETC.

	Number of Pupils from Families whose Head is occupied as below—								Number of Pupils in the Various Subjects						
	Commerce	Agriculture	Law, Medicine, or the Church	Teaching	The Trades	Labouring occupations	Other occupations	Without occupation	English Grammar	English Composition and Rhetoric	English Literature	Canadian History	British History	Ancient History	Mediæval History
1	58	112	21	3	43	16	42	26	245	310	313	173	246	102	16
2	137	48	35	11	70	31	.....	36	331	346	368	285	178	95	12
3	171	146	64	19	167	26	47	74	395	695	695	617	429	166	29
4	23	78	33	.....	123	67	31	26	288	374	374	346	319	117	14
5	81	153	30	6	83	61	23	4	213	415	415	292	292	119	28
6	37	129	19	6	30	19	3	1	182	235	235	182	170	59	19
7	31	67	15	3	62	12	34	20	208	240	240	205	240	17	10
8	73	92	11	3	57	31	26	17	202	307	307	147	101	84	12
9	119	14	3	2	126	9	71	4	211	341	340	302	291	29	11
10	140	100	26	8	133	19	38	4	346	460	460	441	325	106	27
11	56	119	9	4	63	9	10	21	182	285	285	268	276	96	17
12	134	125	28	14	93	21	94	29	336	518	518	482	345	146	39
13	489	109	74	31	282	49	101	27	804	1,122	1,122	1,052	1,052	429	67
14	55	97	5	1	27	12	25	12	192	232	232	230	158	76	5
15	135	91	43	21	154	31	118	15	482	590	590	410	291	210	12
16	55	228	14	8	65	39	46	18	320	432	439	419	427	124	30
17	380	174	93	32	294	76	88	114	892	1,198	1,198	591	860	263	50
18	9	67	6	1	30	14	3	1	90	124	124	90	70	42	10
19	40	114	22	4	27	28	23	12	110	263	263	143	263	74	8
20	69	31	9	4	51	67	59	24	145	309	309	295	309	79	6
21	24	27	6	3	55	21	117	30	205	283	281	178	167	69	4
22	95	108	20	10	58	53	28	14	215	372	372	276	250	128	12
23	369	87	104	52	269	69	370	56	480	1,343	1,339	937	834	179	37
24	112	151	17	13	93	49	21	.....	360	445	445	411	291	132	29
25	21	102	9	1	42	26	24	.....	164	221	221	198	198	34	15
26	88	53	30	5	59	170	45	45	368	487	487	368	257	128	15
27	35	122	9	5	34	18	40	11	226	269	269	243	185	46	7
28	86	5	12	1	52	20	35	10	193	219	219	135	201	35	2
29	70	209	9	2	8	76	24	6	284	398	398	384	362	115	24
30	26	84	9	.....	12	.....	46	15	121	170	190	170	147	32	16
31	195	58	7	5	156	49	6	3	371	469	469	449	449	78	18
32	16	126	4	2	50	22	20	12	153	153	153	146	146	67	7
33	204	169	27	5	75	70	9	.....	407	550	550	467	467	123	12
34	102	50	26	2	89	36	72	14	260	381	381	357	357	97	12
35	18	99	7	3	45	16	12	10	125	180	180	162	101	38	35
36	72	80	10	3	91	42	15	32	239	334	334	319	319	71	13
37	172	137	14	14	124	25	34	49	462	492	566	543	420	260	31
38	37	90	12	3	22	12	7	33	145	204	216	211	160	89	11
39	350	10	45	15	350	.....	30	75	603	870	870	750	750	400	50
40	118	58	42	16	139	18	210	52	467	638	638	405	624	146	16
41	195	27	68	27	96	27	152	80	420	640	640	302	342	182	38
42	132	21	14	6	64	11	13	22	203	283	283	273	273	83	7
43	302	30	62	31	150	8	70	28	430	675	675	620	446	179	24
44	203	31	52	24	152	54	132	33	392	667	667	348	417	151	23
45	129	25	31	16	184	30	154	8	395	576	576	492	291	144	17
46	18	153	13	.....	37	13	7	.....	174	241	241	233	233	72	12
47	111	33	31	10	183	91	97	32	473	580	580	409	328	82	17
48	88	183	20	12	92	56	27	8	256	461	461	327	392	128	27
	5,680	4,422	1,270	467	4,761	1,719	2,699	1,163	14,765	21,397	21,528	17,083	16,049	5,721	953
1	10	102	3	3	13	14	9	4	140	158	158	158	158	54	.....
2	27	61	7	.....	8	8	7	14	96	132	132	132	82	36	.....
3	12	67	15	1	29	7	5	2	87	130	130	130	83	47	4
4	11	21	5	3	16	4	9	1	49	70	70	69	69	21	.....
5	35	59	13	1	38	37	41	5	170	227	227	170	142	81	4

COLLEGIATE INSTITUTES
II. TABLE L—ATTENDANCE, PUPILS IN THE SCHOOLS

Number of Pupils in the Various Subjects—Continued

Collegiate Institutes	Modern History	Geography	Reading	Arithmetic and Mensuration	Algebra	Geometry	Trigonometry	French	German	Latin	Greek
1 Barrie	11	160	242	245	301	247	19	228	28	257	4
2 Kitchener (Berlin)	12	237	237	243	331	190	12	175	102	268	21
3 Brantford	20	495	262	456	687	386	33	519	99	404	7
4 Brockville	13	286	195	236	355	174	27	349	38	315	7
5 Chatham	16	268	268	268	327	240	35	257	33	290	10
6 Clinton	12	180	178	182	230	181	21	168	21	205	....
7 Cobourg	9	188	171	208	218	90	10	169	10	169	6
8 Collingwood	13	202	147	202	285	104	17	231	24	239	3
9 Fort William	9	248	250	250	249	131	17	231	15	232	4
10 Galt	14	371	341	342	431	233	38	307	57	306	4
11 Goderich	10	182	162	192	285	170	18	148	24	174	4
12 Guelph	29	336	224	336	418	289	51	386	66	424	31
13 Hamilton	68	804	759	839	1,135	894	109	830	254	1,101	42
14 Ingersoll	4	192	192	192	206	146	6	166	21	166	3
15 Kingston	12	430	382	481	452	372	10	442	95	428	8
16 Lindsay	30	323	289	289	382	256	43	189	33	313	71
17 London	40	891	698	889	982	653	87	784	71	894	5
18 Morrisburg	8	79	79	80	117	104	8	103	17	119	5
19 Napanee	11	150	158	165	264	149	9	160	36	165	16
20 Niagara Falls	13	194	190	223	287	209	14	253	34	199	1
21 North Bay	1	205	205	205	204	153	5	146	21	135	....
22 Orillia	8	279	207	286	379	227	18	274	41	322	1
23 Ottawa	34	879	728	953	1,262	758	98	1,179	171	868	37
24 Owen Sound	26	360	360	360	387	257	31	208	37	260	9
25 Perth	12	135	89	135	221	132	22	164	36	172	5
26 Peterborough	13	368	368	341	442	207	23	341	62	313	9
27 Picton	12	232	176	232	208	151	11	173	35	195	1
28 Port Arthur	2	195	135	207	177	103	6	162	22	165	8
29 Renfrew	24	284	251	289	397	232	21	293	44	286	16
30 Ridgetown	8	139	121	142	175	126	15	23	1	141	....
31 St. Catharines	21	371	371	329	464	213	21	307	59	303	9
32 St. Mary's	15	146	153	153	146	146	17	157	18	184	6
33 St. Thomas	13	407	357	407	529	238	13	512	28	403	3
34 Sarnia	10	260	260	260	380	193	14	273	24	270	9
35 Seaforth	16	125	120	125	190	148	38	180	49	182	8
36 Smith's Falls	13	239	173	215	337	210	20	198	22	289	4
37 Stratford	21	497	371	423	553	300	33	242	66	357	4
38 Strathroy	5	156	145	146	211	160	12	160	19	186	5
39 Toronto, Harbord	50	590	590	590	860	860	65	870	575	850	65
40 Toronto, Humberside	11	489	439	467	634	413	35	443	137	523	20
41 Toronto, Jarvis	38	420	420	420	645	472	50	550	310	560	32
42 Toronto, Malvern Av	2	190	190	19	277	277	12	260	72	260	....
43 Toronto, Oakwood	21	456	340	342	670	460	27	671	226	652	27
44 Toronto, Parkdale	23	392	217	390	676	458	38	561	212	590	29
45 Toronto, Riverdale	15	393	393	393	569	389	40	565	166	552	30
46 Vankleek Hill	10	177	177	177	219	219	14	151	4	161	4
47 Windsor	6	418	359	448	447	239	20	352	34	339	1
48 Woodstock	25	279	311	281	364	270	36	235	45	325	24
Totals	809	15,297	13,450	15,053	19,965	13,229	1,339	15,745	3,614	16,511	618
High Schools											
1 Alexandria	...	140	140	140	158	75	.....	151	.....	154	....
2 Alliston	...	96	96	96	132	82	.....	64	.....	71	....
3 Almonte	3	83	88	88	137	91	7	92	7	110	....
4 Amherstburg	...	49	49	49	48	45	.....	56	.....	58	....
5 Arnprior	4	170	170	170	227	148	7	148	20	225	....

AND HIGH SCHOOLS—Continued
AND IN THE VARIOUS SUBJECTS, ETC.—Continued

	Number of Pupils in the Various Subjects—Continued											Special Courses				
	Zoology	Botany	Chemistry	Physics	Mineralogy	Writing	Bookkeeping	Stenography	Typewriting	Art	Physical Culture	Commercial	Agriculture	Manual Training	Household Science	Art (Middle School)
1	205	205	162	169	8	90	221	14	16	206	318	14	....	.....	.....	13
2	142	142	108	237	6	237	73	73	73	90	366	.....	....	152	161	11
3	252	252	297	465	7	121	121	121	63	248	710	121	....	127	152	16
4	189	189	152	284	9	260	55	55	56	169	379	49	....	.....	.....	8
5	202	202	233	322	11	182	95	95	95	176	441	95	....	86	138	27
6	192	192	192	199	12	152	92	7	12	194	244	4	140	.....	.....	22
7	132	132	46	170	9	145	65	65	65	115	240	.....	....	.....	.....	1
8	153	153	234	235	12	141	61	61	61	155	310	61	....	75	106	14
9	185	185	123	248	4	95	95	94	95	180	346	95	....	96	115	2
10	195	195	112	286	5	342	114	115	140	179	465	114	....	183	180	17
11	112	112	134	204	9	162	89	51	20	118	280	20	....	.....	.....	...
12	254	254	249	405	18	326	199	112	120	224	528	.....	....	.....	.....	8
13	885	869	814	1,086	24	498	.....	.....	.....	790	1,062	.....	....	351	397	24
14	168	168	145	206	1	175	26	26	26	169	234	26	....	84	61	...
15	138	138	203	415	4	277	80	83	88	142	593	80	....	.....	.....	...
16	266	263	240	343	13	233	63	63	64	237	459	63	....	.....	.....	28
17	690	690	249	273	21	890	240	238	120	650	1,242	240	....	.....	.....	...
18	84	84	43	43	5	79	57	15	11	91	127	.....	....	.....	.....	...
19	140	140	175	175	7	165	140	40	25	150	268	35	....	.....	.....	12
20	120	120	77	161	5	203	118	122	86	47	314	99	....	.....	.....	...
21	73	73	93	93	....	129	48	48	48	70	282	.....	....	.....	.....	...
22	208	208	182	290	11	50	50	50	50	205	380	50	....	.....	.....	...
23	526	526	598	930	13	802	198	207	123	855	1,365	213	....	.....	.....	157
24	191	191	310	341	16	247	67	35	35	208	456	35	....	153	203	...
25	106	106	89	173	3	89	82	38	38	99	224	36	....	.....	.....	...
26	179	179	90	237	11	295	107	107	49	142	482	107	....	107	143	...
27	151	151	107	194	8	175	62	62	62	194	273	62	45	.....	.....	...
28	48	48	35	86	....	150	64	64	64	85	221	64	....	89	92	...
29	210	210	221	353	14	260	94	51	22	291	392	56	....	.....	.....	37
30	130	130	117	128	8	140	23	20	20	123	190	.....	....	.....	.....	...
31	224	224	181	382	7	131	28	126	70	229	479	126	....	.....	.....	17
32	164	164	129	206	11	153	75	27	4	118	250	3	....	.....	.....	21
33	280	280	403	403	9	256	407	133	61	250	559	133	....	97	117	19
34	150	150	170	171	8	186	135	95	95	154	385	95	....	.....	.....	...
35	20	20	84	90	20	130	130	20	20	135	208	.....	....	.....	.....	8
36	185	185	206	294	9	127	84	36	36	203	345	36	35	78	119	...
37	290	217	271	330	20	218	72	72	72	268	544	.....	....	191	223	28
38	137	137	102	201	2	145	59	10	10	146	208	.....	....	.....	.....	...
39	480	480	450	650	20	450	220	.....	.....	490	860	.....	....	.....	.....	...
40	251	250	183	541	8	362	187	....	.....	320	642	.....	....	.....	.....	41
41	360	360	265	380	8	.....	.....	....	.....	352	650	.....	....	.....	.....	12
42	169	169	174	180	4	160	160	....	.....	216	283	.....	....	.....	.....	14
43	326	326	343	641	5	260	131	....	.....	321	679	.....	....	237	312	34
44	387	387	229	580	9	217	217	....	.....	302	676	.....	....	.....	.....	25
45	407	407	240	545	8	393	152	....	.....	362	577	.....	....	207	233	29
46	162	162	89	202	6	145	20	20	20	157	241	20	157	.....	.....	8
47	292	292	116	304	10	217	146	146	149	174	579	144	....	218	189	6
48	185	185	136	311	12	163	.....	....	.....	153	475	101	....	135	167	17
	10,995	10902	9,601	15,162	450	10,823	5,022	2817	2,284	10952	21,831	2,397	377	2,666	3,108	676
1	140	140	34	158	....	140	12	....	.....	140	158	.....	....	.....	.....	...
2	.....	96	82	132	....	50	50	....	.....	96	132	.....	....	.....	.....	...
3	93	93	44	116	....	67	28	9	12	95	137	.....	....	.....	.....	...
4	48	48	45	68	....	49	49	10	14	48	70	.....	....	33	.....	...
5	173	173	154	156	....	170	109	....	.....	170	225	.....	....	.....	.....	...

II. TABLE L—ATTENDANCE, PUPILS IN THE SCHOOLS AND COLLEGIATE INSTITUTES

High Schools—Continued	Pupils				Number of Pupils in—			Number of Pupils from—		
	Boys	Girls	Totals	Average Daily Attendance	Lower School	Middle School	Upper School	Municipalities forming High School Dist't.	Municipalities within the County or Territorial District	Other Counties or Districts
6 Arthur	35	87	122	78	78	35	9	55	63	4
7 Athens	94	136	230	154	144	86	.....	96	133	1
8 Aurora	60	69	129	88	70	43	16	63	65	1
9 Avonmore	34	42	76	63	58	18	.....	65	11	....
10 Aylmer	75	92	167	101	105	42	20	65	102	....
11 Beamsville	49	39	88	41	71	17	.....	30	58	....
12 Belleville	171	220	391	260	248	108	35	276	101	14
13 Bowmanville	66	69	135	98	93	33	9	80	55	....
14 Bradford	50	54	104	66	59	45	.....	42	60	2
15 Brampton	91	113	204	126	97	72	35	108	85	11
16 Brighton	39	45	84	52	51	33	.....	52	32	....
17 Caledonia	57	76	133	84	92	28	13	54	57	22
18 Campbellford	86	101	187	123	125	62	.....	123	56	8
19 Carleton Place	80	137	217	146	125	74	18	136	57	24
20 Cayuga	46	51	97	70	62	21	14	55	42	....
21 Chatsworth	19	46	65	42	46	19	.....	53	10	2
22 Chesley	65	79	144	100	73	53	18	71	53	20
23 Chesterville	56	71	127	79	88	39	.....	57	69	1
24 Colborne	33	53	86	56	55	31	.....	42	44	....
25 Cornwall	148	208	356	243	227	105	24	191	142	23
26 Deseronto	59	59	118	74	97	21	.....	87	16	15
27 Dundalk	39	55	94	54	64	30	.....	35	39	20
28 Dundas	72	100	172	108	136	30	6	113	59	....
29 Dunnville	76	102	178	116	100	60	18	93	70	15
30 Durham	56	75	131	90	85	46	.....	61	70	....
31 Dutton	55	65	120	80	67	39	14	31	89	....
32 Elora	45	51	96	58	71	25	.....	51	45	....
33 Essex	68	79	147	91	92	40	15	56	91	....
34 Fergus	74	89	163	100	98	51	14	87	73	3
35 Flesherton	38	54	92	68	49	43	.....	69	22	1
36 Forest	67	64	131	87	86	35	10	71	60	....
37 Gananoque	56	92	148	92	87	55	6	96	29	23
38 Georgetown	76	92	168	113	114	33	21	45	65	58
39 Glencoe	38	75	113	73	62	37	14	30	71	12
40 Gravenhurst	20	31	51	33	37	14	.....	51	.....	....
41 Grimsby	53	83	136	78	99	37	.....	51	59	26
42 Hagersville	48	75	123	82	94	29	.....	49	74	....
43 Haileybury	74	75	149	96	133	15	1	149	.....	....
44 Harriston	56	74	130	87	67	25	38	45	36	49
45 Hawkesbury	36	40	76	44	61	15	.....	36	28	12
46 Iroquois	70	93	163	111	120	30	13	63	96	4
47 Kemptville	81	140	221	145	95	94	32	66	88	67
48 Kenora	53	72	125	80	88	37	.....	123	2	....
49 Kincardine	80	149	229	161	119	87	23	224	.....	5
50 Leamington	59	105	164	98	110	44	10	70	78	16
51 Listowel	117	113	230	162	130	76	24	79	137	14
52 Lucan	59	61	120	80	74	34	12	120	.....	....
53 Madoc	48	102	150	94	75	66	9	46	104	....
54 Markdale	26	52	78	38	56	22	.....	52	26	....
55 Markham	89	74	163	103	90	37	36	36	108	19
56 Meaford	84	90	174	114	106	44	24	92	77	5
57 Midland	76	62	138	89	88	36	14	119	18	1
58 Mitchell	60	72	132	93	77	55	.....	66	63	3
59 Morewood	40	32	72	48	46	26	.....	49	.....	23
60 Mount Forest	76	106	182	122	88	78	16	105	27	50
61 Newburgh	40	65	105	70	86	19	.....	14	90	1
62 Newcastle	18	19	37	21	25	12	.....	30	5	2
63 Newmarket	119	136	255	153	179	52	24	100	135	20
64 Niagara	16	14	30	11	25	5	.....	24	6	....

AND HIGH SCHOOLS—Continued
IN THE VARIOUS SUBJECTS, ETC.—Continued

Number of Pupils from Families whose Head is occupied as below—								Number of Pupils in the Various Subjects						
	Commerce	Agriculture	Law, Medicine, or the Church	Teaching	The Trades	Labouring Occupations	Other Occupations	Without Occupation	English Grammar	English Composition and Rhetoric	English Literature	Canadian History	British History	Ancient History	Mediæval History
6	16	66	.....	.....	11	3	13	13	89	120	120	117	80	39	6
7	25	129	8	5	29	10	19	5	144	230	230	230	230	86	....
8	10	58	3	1	10	12	33	2	113	129	129	113	113	43	15
9	10	52	3	.....	4	3	4	.....	58	76	76	76	51	18	....
10	19	98	13	2	19	12	4	.....	114	167	167	147	167	42	12
11	8	59	4	3	9	1	2	2	73	88	88	88	88	17	....
12	112	86	20	8	66	17	59	23	293	384	384	270	281	50	22
13	12	48	6	4	30	11	8	16	93	130	130	126	126	33	4
14	19	60	6	.....	8	6	2	3	59	104	103	104	104	44	....
15	33	91	21	2	33	11	3	10	97	190	190	169	169	72	14
16	14	38	9	.....	12	7	2	2	65	84	84	84	65	33	....
17	16	56	7	1	16	5	12	20	92	128	126	120	74	28	7
18	18	58	6	2	20	36	37	10	125	187	187	187	187	62	....
19	31	84	6	2	59	9	21	5	125	216	217	199	135	74	10
20	10	54	9	2	6	8	8	.....	67	97	97	67	50	29	6
21	5	46	1	1	2	.....	8	2	55	65	65	55	41	20	....
22	28	61	8	1	19	8	16	3	73	144	144	126	90	53	9
23	28	64	4	.....	14	2	3	12	88	127	127	127	79	39	....
24	6	40	5	.....	4	15	6	10	50	86	86	55	86	31	....
25	74	109	25	9	76	26	36	1	227	350	350	285	285	101	19
26	16	41	.....	.....	20	32	9	.....	97	118	118	118	118	21	....
27	6	67	4	2	3	4	8	.....	64	94	94	94	94	30	....
28	42	43	5	1	53	11	3	14	151	172	172	172	172	36	6
29	40	85	5	2	29	7	5	5	100	173	175	160	160	58	13
30	11	61	7	2	14	34	2	.....	85	131	131	131	96	46	....
31	10	76	11	.....	14	3	6	.....	77	120	117	77	85	45	14
32	13	36	1	1	23	11	7	4	71	96	96	96	96	25	....
33	35	72	9	3	17	2	8	1	100	139	137	129	68	41	7
34	40	73	9	6	10	13	9	3	163	163	163	149	163	51	8
35	5	75	2	.....	10	.....	.....	.....	49	92	92	92	92	43	....
36	20	48	6	3	12	15	8	19	86	126	126	121	84	35	5
37	32	53	9	1	37	5	.....	11	87	148	148	146	146	55	2
38	30	66	4	1	45	14	5	3	127	166	166	147	147	42	10
39	3	92	3	.....	3	3	4	5	62	106	105	99	102	37	6
40	1	4	.....	1	16	18	7	4	36	51	51	51	51	14	....
41	9	67	8	1	19	16	9	7	99	136	136	136	86	37	....
42	10	71	5	.....	23	4	8	2	101	123	123	123	123	29	....
43	34	10	12	3	74	2	14	.....	117	149	149	94	79	28	1
44	25	51	6	4	10	2	30	2	82	122	122	104	67	37	29
45	18	31	2	.....	13	.....	12	.....	61	76	76	76	47	15	....
46	10	99	5	6	10	14	9	10	120	163	163	102	78	37	7
47	10	151	16	1	17	7	17	2	126	210	210	194	147	98	21
48	28	3	5	2	37	26	24	.....	100	120	120	120	120	19	....
49	28	141	12	1	20	9	15	3	157	229	229	193	193	49	17
50	31	69	10	.....	12	8	26	8	125	161	161	159	114	49	5
51	45	122	11	5	22	13	12	.....	157	229	229	209	209	82	23
52	10	92	7	.....	6	.....	2	3	74	115	115	108	77	34	12
53	36	89	4	4	4	8	3	2	75	145	145	141	141	66	4
54	11	45	2	.....	7	4	3	6	64	78	78	78	78	22	....
55	21	88	7	.....	9	7	21	10	111	140	140	127	127	37	14
56	29	82	15	.....	25	10	13	.....	126	167	167	147	92	52	11
57	21	24	4	2	18	33	35	1	104	135	134	130	130	40	5
58	25	65	4	2	19	5	7	5	86	132	132	132	132	55	....
59	9	39	6	2	8	4	4	.....	53	72	72	71	71	25	....
60	40	78	11	3	19	2	13	16	88	179	179	166	166	78	16
61	2	86	3	1	4	1	7	1	86	105	105	105	105	19	....
62	8	16	5	1	1	4	2	.....	28	37	37	37	28	12	....
63	42	85	21	6	40	26	18	17	162	235	238	138	138	59	9
64	3	9	1	.....	5	2	6	4	27	30	30	24	15	5	....

COLLEGIATE INSTITUTES
II. TABLE L—ATTENDANCE, PUPILS IN THE SCHOOLS

High Schools—Continued	Number of Pupils in the Various Subjects—Continued										
	Modern History	Geography	Reading	Arithmetic and Mensuration	Algebra	Geometry	Trigonometry	French	German	Latin	Greek
6 Arthur	5	88	88	88	120	87	6	24	....	88	....
7 Athens	....	144	144	144	230	189	....	209	....	221	....
8 Aurora	3	70	70	113	128	98	15	108	5	115	....
9 Avonmore	....	58	58	58	76	51	....	52	....	49	....
10 Aylmer	14	114	114	114	163	163	14	78	22	150	....
11 Beamsville	....	73	73	73	88	53	....	87	6	88	....
12 Belleville	17	248	248	282	391	287	35	196	20	247	....
13 Bowmanville	3	93	126	93	132	124	6	84	12	89	6
14 Bradford	....	59	59	61	104	82	....	75	....	99	....
15 Brampton	16	97	97	97	192	192	16	180	16	190	8
16 Brighton	....	65	65	65	83	62	....	32	....	53	....
17 Caledonia	6	92	92	92	128	90	7	110	18	125	....
18 Campbellford	....	125	53	125	125	72	....	155	....	167	....
19 Carleton Place	10	125	125	131	216	152	18	198	....	180	....
20 Cayuga	12	67	67	67	97	56	6	82	....	93	....
21 Chatsworth	....	55	55	55	65	41	....	29	....	51	....
22 Chesley	....	73	73	76	142	90	13	102	*30	133	7
23 Chesterville	....	88	88	88	127	87	....	75	....	94	....
24 Colborne	....	50	55	50	86	62	....	32	....	61	....
25 Cornwall	9	180	227	250	307	211	20	191	4	270	3
26 Deseronto	....	97	97	97	118	66	....	110	....	110	....
27 Dundalk	....	64	64	64	94	61	....	60	....	60	....
28 Dundas	1	151	151	151	155	81	6	112	13	129	....
29 Dunnville	9	100	100	100	171	168	16	156	68	170	....
30 Durham	....	85	85	85	131	96	....	79	....	80	....
31 Dutton	4	77	77	77	119	93	13	72	....	75	....
32 Elora	....	71	71	71	63	49	....	54	....	48	....
33 Essex	9	100	63	102	139	95	10	123	26	138	....
34 Fergus	6	163	163	98	157	157	8	140	1	155	....
35 Flesherton	....	49	49	52	92	80	....	52	....	53	....
36 Forest	9	86	86	86	131	84	5	67	....	102	3
37 Gananoque	3	87	87	87	148	102	4	111	11	107	....
38 Georgetown	18	127	85	147	167	115	11	45	....	128	3
39 Glencoe	5	62	62	62	107	81	8	33	....	40	....
40 Gravenhurst	....	37	37	37	51	30	....	38	....	40	....
41 Grimsby	....	99	99	99	136	86	....	129	11	130	....
42 Hagersville	....	101	101	101	123	61	....	91	....	93	1
43 Haileybury	1	115	125	132	146	140	20	91	7	97	....
44 Harriston	20	82	82	82	122	85	29	40	22	109	....
45 Hawkesbury	....	61	61	61	76	48	....	70	....	58	....
46 Iroquois	6	120	72	120	156	84	7	72	14	136	....
47 Kemptville	9	126	154	154	211	174	23	147	17	205	3
48 Kenora	....	100	100	100	120	79	....	89	10	99	....
49 Kincardine	12	157	157	157	215	162	17	99	6	197	....
50 Leamington	4	126	126	126	163	111	7	131	2	127	....
51 Listowel	18	157	157	157	229	229	23	170	27	221	4
52 Lucan	5	74	74	74	115	84	12	64	2	82	....
53 Madoc	5	75	75	75	145	120	4	89	2	122	1
54 Markdale	....	64	64	66	78	56	....	41	....	55	....
55 Markham	22	90	90	90	140	140	14	123	4	150	....
56 Meaford	8	147	167	127	151	96	18	101	8	121	....
57 Midland	3	104	104	104	138	86	12	117	8	127	....
58 Mitchell	....	77	77	85	132	90	....	58	7	101	....
59 Morewood	....	53	53	53	72	54	....	49	....	49	....
60 Mount Forest	16	88	88	88	179	179	11	158	7	170	....
61 Newburgh	....	86	86	86	105	75	....	52	....	90	....
62 Newcastle	....	28	28	28	28	28	....	32	....	29	....
63 Newmarket	16	185	112	182	238	184	11	199	21	198	3
64 Niagara	....	27	27	27	30	15	....	27	....	24	....

AND HIGH SCHOOLS—Continued
AND IN THE VARIOUS SUBJECTS, ETC.—Continued

	Number of Pupils in the Various Subjects—Continued											Special Courses				
	Zoology	Botany	Chemistry	Physics	Mineralogy	Writing	Bookkeeping	Stenography	Typewriting	Art	Physical Culture	Commercial	Agriculture	Manual Training	Household Science	Art (Middle School)
6	93	93	52	122	5	88	.....	.....	.....	91	120	....	103	....	....	3
7	144	144	189	230	....	144	42	.....	.....	144	228	....	....	....	....	....
8	74	74	103	127	4	70	70	.....	.....	76	129	....	....	....	....	....
9	.....	58	51	76	....	25	25	.....	.....	58	76	....	....	....	....	....
10	135	135	136	155	15	114	114	.....	.....	114	164	....	....	....	....	....
11	73	73	38	42	....	73	.....	.....	.....	73	88	....	....	....	....	....
12	257	257	210	225	12	350	52	40	75	240	391	40	....	....	115	24
13	97	97	80	131	3	93	.....	.....	.....	93	135	....	124	....	....	....
14	59	59	82	103	....	59	29	.....	.....	59	104	....	....	....	....	....
15	109	109	78	109	6	97	86	.....	.....	92	204	....	....	....	....	....
16	48	48	35	83	....	41	39	39	.....	51	80	....	....	....	....	....
17	99	99	69	128	....	92	48	.....	.....	92	133	....	....	....	....	....
18	125	125	134	187	....	53	125	.....	.....	125	187	....	....	....	....	....
19	125	125	134	216	....	64	.....	.....	.....	132	214	....	....	....	....	....
20	79	79	54	97	12	67	62	.....	.....	67	97	....	....	....	....	....
21	.....	55	41	65	....	55	36	.....	.....	55	65	....	....	....	....	....
22	79	79	101	139	6	36	36	.....	.....	73	144	....	....	....	....	....
23	79	79	127	127	....	88	81	.....	.....	82	126	....	....	....	....	....
24	50	50	55	62	....	55	40	.....	.....	50	86	....	....	....	....	....
25	186	186	193	300	7	227	198	47	47	146	350	47	....	....	....	....
26	97	97	66	118	....	97	41	.....	22	97	118	....	....	....	....	....
27	64	64	61	94	....	64	18	.....	.....	64	94	....	....	....	....	....
28	114	114	47	134	1	136	64	37	37	142	172	37	....	....	....	....
29	105	105	110	112	3	100	12	12	15	99	177	....	....	....	....	....
30	85	85	96	131	....	85	.....	.....	.....	85	131	....	....	....	....	....
31	81	81	90	119	4	77	31	.....	.....	77	120	....	....	....	....	....
32	40	40	49	65	....	33	50	18	32	28	96	28	....	....	....	....
33	90	90	93	139	2	63	.....	.....	.....	85	146	....	47	....	....	6
34	106	106	157	157	6	163	98	.....	.....	98	163	....	....	....	....	....
35	49	49	78	92	....	49	43	.....	.....	49	92	....	....	....	....	....
36	94	94	44	131	9	86	.....	.....	.....	90	131	....	....	....	....	....
37	80	80	104	148	....	74	63	20	29	84	149	....	....	....	....	6
38	145	145	71	157	18	85	24	.....	13	85	168	....	....	....	....	....
39	66	66	40	45	6	62	.....	.....	.....	62	113	....	....	....	....	....
40	32	32	18	47	....	37	30	10	12	37	51	5	....	....	....	....
41	99	99	76	126	....	.....	.....	.....	.....	97	136	....	....	....	....	....
42	101	101	92	123	....	101	.....	.....	.....	101	123	....	55	....	....	....
43	36	36	45	130	14	115	14	6	.....	54	149	....	....	....	....	....
44	99	99	76	82	15	55	.....	.....	.....	82	128	....	....	....	....	....
45	61	61	48	76	....	61	27	.....	.....	61	75	....	....	....	....	....
46	127	127	75	127	5	72	72	.....	15	124	163	....	....	....	....	....
47	166	166	108	207	15	148	89	.....	.....	147	221	....	....	....	....	....
48	63	63	80	81	....	100	40	11	.....	65	121	....	....	....	....	....
49	143	143	120	116	12	179	176	11	11	178	223	11	....	....	....	10
50	124	124	116	163	4	126	.....	.....	.....	130	164	....	....	....	....	7
51	175	175	168	228	18	130	130	.....	.....	154	229	....	....	....	....	....
52	82	82	82	120	4	74	.....	.....	.....	74	120	....	....	....	....	7
53	81	81	124	144	6	75	66	.....	.....	118	150	....	....	....	....	....
54	64	64	33	78	....	38	.....	.....	.....	64	78	....	....	....	....	....
55	115	115	80	140	23	90	90	.....	.....	90	163	....	....	....	....	....
56	87	87	86	139	9	126	99	31	31	96	174	....	....	....	....	....
57	117	117	63	131	5	70	70	.....	.....	114	138	....	....	....	....	....
58	77	77	90	132	....	40	40	.....	.....	77	132	....	....	....	....	....
59	.....	53	35	71	....	53	.....	.....	.....	53	72	....	....	....	....	....
60	96	96	125	182	....	88	.....	.....	.....	88	182	....	....	....	....	21
61	86	86	75	105	....	86	.....	.....	.....	86	104	....	....	....	....	....
62	28	28	28	37	....	28	28	.....	.....	28	37	....	....	....	....	....
63	131	131	112	225	14	135	131	33	33	141	254	33	....	....	....	11
64	22	22	12	25	....	18	20	16	18	20	30	....	....	....	....	....

COLLEGIATE INSTITUTES
II. TABLE L—ATTENDANCE, PUPILS IN THE SCHOOLS

	High Schools—Continued	Pupils				Number of Pupils in—		
		Boys	Girls	Totals	Average daily Attendance	Lower School	Middle School	Upper School
65	Niagara Falls South	51	67	118	81	91	25	2
66	Norwood	48	59	107	69	80	27	.....
67	Oakville	68	69	137	87	98	39	.....
68	Omemee	17	32	49	31	31	18	.....
69	Orangeville	107	116	223	143	122	81	20
70	Oshawa	97	125	222	141	167	37	18
71	Paris	66	72	138	91	100	26	12
72	Parkhill	58	89	147	99	110	30	7
73	Parry Sound	44	93	137	86	105	29	3
74	Pembroke	119	88	207	130	131	64	12
75	Penetanguishene	46	42	88	52	61	27	.....
76	Petrolea	80	118	198	123	133	47	18
77	Plantagenet	25	50	75	46	60	15	.....
78	Port Dover	24	27	51	32	43	8	.....
79	Port Elgin	46	59	105	70	65	34	6
80	Port Hope	107	131	238	156	152	73	13
81	Port Perry	63	58	121	73	85	24	12
82	Port Rowan	22	25	47	30	29	18	.....
83	Prescott	60	89	149	97	102	34	13
84	Richmond Hill	67	63	130	80	95	35	.....
85	Rockland	28	22	50	31	32	18	.....
86	Sault Ste. Marie	148	155	303	206	218	70	1
87	Shelburne	42	74	116	80	80	36	.....
88	Simcoe	101	128	229	145	130	87	12
89	Smithville	36	53	89	52	59	30	.....
90	Stirling	52	78	130	94	86	38	6
91	Streetsville	33	34	67	44	40	27	.....
92	Sudbury	83	77	160	94	113	38	9
93	Sydenham	67	80	147	95	93	51	3
94	Thorold	44	43	87	54	66	21	.....
95	Tillsonburg	66	92	158	102	81	68	9
96	Toronto, Commerce and Finance	239	344	583	375	260	167	156
97	Toronto, North	91	108	199	112	104	75	20
98	Trenton	84	92	176	113	115	56	5
99	Uxbridge	84	95	179	118	107	42	30
100	Vienna	23	24	47	30	31	16	.....
101	Walkerton	67	73	140	96	94	35	11
102	Wardsville	23	38	61	41	33	28	.....
103	Waterdown	37	45	82	50	65	17	.....
104	Waterford	34	43	77	49	51	26	.....
105	Watford	66	89	155	107	98	44	13
106	Welland	126	144	270	167	188	63	19
107	Weston	69	87	156	92	84	61	11
108	Whitby	52	74	126	70	83	28	15
109	Wiarton	40	60	100	65	72	24	4
110	Williamstown	52	76	128	92	67	53	8
111	Winchester	70	81	151	93	108	34	9
112	Wingham	96	123	219	162	113	68	38
1	Totals, High Schools	7,154	9,091	16,245	10,493	10,366	4,723	1,156
2	Totals, Collegiate Institutes	10,551	11,630	22,181	14,332	14,159	6,204	1,818
3	Grand Totals, 1915	17,705	20,721	38,426	24,825	24,525	10,927	2,974
4	Grand Totals, 1914	17,001	19,465	36,466	23,360	22,849	10,541	3,076
5	Increases	704	1,256	1,960	1,465	1,676	386	.....
6	Decreases	.....	.....	.....	.....	.....	.....	102
7	Percentages	46.07	53.92	.....	64.60	63.82	28.43	7.74

AND HIGH SCHOOLS—Continued
AND IN THE VARIOUS SUBJECTS, ETC.—Continued

		Number of Pupils from—			Number of Pupils from Families whose Head is occupied as below—								
	Municipalities forming High School District	Municipalities within the County or Territorial District	Other Counties or Districts	Commerce	Agriculture	Law, Medicine or the Church	Teaching	The Trades	Labouring occupations	Other occupations	Without occupation
65	75	40	3	21	46	4	1	30		11	.....
66	46	41	20	9	60	4	.....	7	11	10	6
67	71	66	.....	19	52	4	1	26	8	9	18
68	32	13	4	.....	24	5	1	7	.....	11	1
69	115	73	35	14	119	14	1	31	7	34	3
70	162	50	10	45	51	7	4	83	9	19	4
71	96	34	8	17	45	10	2	32	6	22	4
72	60	73	14	16	78	6	5	16	12	7	7
73	119	18	.....	10	8	8	3	25	40	35	8
74	165	38	4	47	44	16	1	51	16	22	10
75	74	12	2	14	14	9	1	22	10	17	1
76	110	86	2	48	40	5	.....	30	19	23	33
77	53	19	3	6	48	2	.....	6	6	4	3
78	33	15	3	10	16	1	3	3	10	8	.....
79	60	43	2	14	40	2	.....	4	12	3	30
80	135	103	.....	36	80	11	4	36	51	13	7
81	39	61	21	21	65	5	1	19	5	2	3
82	18	29	.....	6	23	.....	.....	6	4	5	3
83	124	23	2	38	24	8	1	33	12	16	17
84	30	98	2	5	102	3	.....	8	10	2	.....
85	28	22	.....	12	15	4	.....	7	9	2	1
86	247	38	18	65	23	16	4	39	81	63	12
87	35	81	.....	12	74	3	1	5	5	16	.....
88	94	127	8	48	106	11	1	43	12	4	4
89	29	44	16	4	49	9	2	6	4	11	4
90	38	92	.....	17	85	12	2	2	6	4	2
91	23	28	16	13	41	4	1	4	.....	2	2
92	120	38	2	26	2	7	.....	36	14	71	4
93	146	.....	1	9	90	12	.....	19	7	7	3
94	64	19	4	17	18	1	1	41	4	5	.....
95	80	44	34	33	84	7	5	15	3	9	2
96	568	12	3	240	18	30	10	150	18	60	57
97	163	36	.....	70	33	11	6	48	2	9	20
98	114	27	35	36	51	10	.....	35	30	10	4
99	74	100	5	34	96	9	4	15	9	6	6
100	43	.....	4	.....	35	2	.....	2	1	7	.....
101	76	59	5	32	52	4	2	26	14	5	5
102	21	24	16	6	36	5	.....	4	3	4	3
103	81	.....	1	12	27	5	1	10	7	10	10
104	28	49	.....	6	51	5	1	7	.....	6	1
105	57	84	14	30	83	12	.....	10	20	.....	.....
106	120	148	2	73	78	19	3	73	13	4	7
107	84	60	12	19	50	9	4	22	7	25	20
108	80	45	1	20	35	11	4	26	17	12	1
109	57	27	16	15	29	2	.....	6	16	24	8
110	123	2	3	12	74	11	.....	16	7	3	5
111	117	31	3	21	86	7	.....	8	8	14	7
112	92	106	21	46	104	14	2	26	8	16	3
1	9,374	5,850	1,021	2,722	6,676	840	201	2,455	1,229	1,4 40	682
2	16,565	4,740	876	5,680	4,422	1,270	467	4,761	1,719	2,6 99	1,163
3	25,939	10,590	1,897	8,402	11,098	2,110	668	7,216	2,948	, 39	1,845
4	24,925	9,744	1,797	7,761	10,326	2,099	601	7,276	2,656	, 17	1,830
5	1,014	846	100	641	772	11	67	.....	292	222	15
6	.....	.....	.....	.....	.....	.....	.....	60	.....	.....	.....
7	67.50	27.56	4.93	21.86	28.88	5.49	1.74	18.78	7.67	10.77	4.80

COLLEGIATE INSTITUTES

II. TABLE L—ATTENDANCE, PUPILS IN THE SCHOOLS

High Schools—Continued	Number of Pupils in the						
	English Grammar	English Composition and Rhetoric	English Literature	Canadian History	British History	Ancient History	Mediæval History
65 Niagara Falls South	91	118	118	117	117	26	1
66 Norwood	80	107	107	107	107	27	.....
67 Oakville	98	137	137	137	87	39	.....
68 Omemee	31	48	48	49	49	18	.....
69 Orangeville	121	210	210	200	135	84	8
70 Oshawa	165	207	207	179	107	44	4
71 Paris	92	138	138	50	76	26	12
72 Parkhill	110	147	147	110	76	30	7
73 Parry Sound	105	137	137	105	137	29	3
74 Pembroke	143	204	204	188	133	68	7
75 Penetanguishene	61	88	88	88	88	27	.....
76 Petrolea	133	192	192	180	127	52	9
77 Plantagenet	60	75	75	75	75	15	.....
78 Port Dover	46	51	51	51	28	8	.....
79 Port Elgin	75	105	105	102	77	40	6
80 Port Hope	181	231	231	225	160	73	8
81 Port Perry	94	110	110	109	61	25	6
82 Port Rowan	37	47	47	46	32	18	.....
83 Prescott	122	146	146	145	59	35	10
84 Richmond Hill	95	130	130	129	129	35	.....
85 Rockland	32	50	50	50	50	18	.....
86 Sault Ste. Marie	218	293	293	288	173	70	7
87 Shelburne	80	116	116	116	86	36	.....
88 Simcoe	160	224	224	180	224	100	9
89 Smithville	59	89	89	55	64	30	.....
90 Stirling	102	130	130	130	130	38	6
91 Streetsville	51	67	67	45	51	27	.....
92 Sudbury	95	158	158	141	73	38	3
93 Sydenham	121	146	146	145	96	52	2
94 Thorold	77	87	87	87	87	16	.....
95 Tillsonburg	116	156	156	155	155	74	7
96 Toronto, Commerce & Finance	382	583	583	582	23	132	132
97 Toronto, North	104	189	189	179	118	75	12
98 Trenton	136	176	176	171	171	56	5
99 Uxbridge	143	171	171	161	161	51	19
100 Vienna	40	47	47	34	34	16	.....
101 Walkerton	94	135	135	130	130	35	8
102 Wardsville	45	58	59	60	47	26	.....
103 Waterdown	65	82	82	82	50	17	.....
104 Waterford	51	77	77	77	56	26	.....
105 Watford	98	147	147	142	100	44	5
106 Welland	221	265	265	260	266	70	17
107 Weston	84	148	148	145	145	84	3
108 Whitby	83	122	122	76	63	28	10
109 Wiarton	72	98	98	72	54	24	2
110 Williamstown	108	120	121	120	120	30	6
111 Winchester	108	146	146	144	151	34	4
112 Wingham	141	207	207	186	137	75	27
1 Totals, High Schools	11,352	15,917	15,915	14,505	12,147	4,758	742
2 Totals, Collegiate Institutes	14,765	21,397	21,528	17,083	16,049	5,721	953
3 Grand Totals, 1915	26,117	37,314	37,443	31,588	28,196	10,479	1,695
4 Grand Totals, 1914	24,252	34,759	34,784	29,461	26,031	9,906	1,700
5 Increases	1,865	2,555	2,659	2,127	2,165	573	.....
6 Decreases	.....	.....	.....	.....	.....	.....	5
7 Percentages	67.96	97.10	97.44	82.20	73.37	27.27	4.41

AND HIGH SCHOOLS—Continued
AND IN THE VARIOUS SUBJECTS, ETC.—Continued

Various Subjects—Continued

	Modern History	Geography	Reading	Arithmetic and Mensuration	Algebra	Geometry	Trigonometry	French	German
65	2	98	90	98	87	87	1	71	2
66	.....	80	80	80	107	65	.....	92	.....
67	.....	98	98	98	134	83	.....	93	4
68	.....	31	31	31	48	32	.....	15	.....
69	8	122	122	121	214	149	12	177	34
70	3	181	165	179	144	83	12	171	19
71	12	100	50	100	138	88	12	60	12
72	7	110	110	110	147	87	7	64	4
73	1	105	105	105	137	137	3	110	4
74	5	179	154	164	178	110	9	157	23
75	.....	61	38	61	88	50	.....	81	15
76	12	131	132	148	186	186	5	156	8
77	.....	60	60	60	75	75	.....	47	.....
78	.....	46	46	46	51	28	.....	17	1
79	.....	75	75	75	105	80	6	90	.....
80	9	161	152	161	230	151	8	129	37
81	6	94	93	97	116	71	9	104	11
82	.....	37	37	37	47	32	.....	47	.....
83	7	122	80	126	145	88	10	145	10
84	.....	129	95	95	129	74	.....	67	21
85	.....	32	17	32	50	31	.....	46	.....
86	6	218	218	218	293	181	11	108	9
87	.....	80	80	80	116	86	.....	20	29
88	9	160	160	160	200	160	9	75	20
89	.....	59	59	59	89	64	.....	47	5
90	.....	102	86	102	130	130	6	103	.....
91	.....	51	51	52	66	48	.....	56	5
92	4	105	100	135	150	101	7	79	22
93	2	121	121	121	147	97	2	110	.....
94	.....	77	77	77	80	51	.....	63	10
95	2	116	116	116	156	156	7	88	20
96	.....	382	.....	546	546	.....	.....	518	.....
97	8	100	104	104	187	187	12	187	45
98	.....	136	136	136	176	124	5	108	17
99	13	143	143	143	173	125	22	132	21
100	.....	40	40	40	47	34	.....	19	.....
101	6	94	94	94	125	92	9	19	43
102	.....	46	45	46	61	45	.....	37	.....
103	.....	65	32	65	82	50	.....	79	.....
104	.....	51	51	51	77	56	.....	66	8
105	8	98	98	98	147	112	5	77	.....
106	6	217	217	217	244	141	17	235	25
107	8	84	84	84	154	110	6	8	7
108	6	83	83	83	122	74	11	54	11
109	3	72	72	72	99	60	3	59	.....
110	7	109	87	108	124	90	7	84	9
111	6	108	108	108	146	90	4	97	2
112	15	138	137	142	208	155	27	149	25
1	492	11,307	10,505	11,636	15,494	10,920	723	10,717	992
2	809	15,297	13,450	15,053	19,965	13,229	1,339	15,745	3,614
3	1,301	26,604	23,955	26,689	35,459	24,149	2,062	26,462	4,606
4	1,221	24,377	21,963	25,344	32,687	23,203	2,285	23,797	5,396
5	80	2,227	1,992	1,345	2,772	946	.....	2,665	.....
6	.....	.....	.....	.....	.....	.....	223	.....	790
7	3.38	69.23	62.34	69.45	92.27	62.84	5.36	68.86	11.98

COLLEGIATE INSTITUTES

II. TABLE L—ATTENDANCE, PUPILS IN THE SCHOOLS

High Schools—Concluded	Number of Pupils in the						
	Latin	Greek	Zoology	Botany	Chemistry	Physics	Mineralogy
65 Niagara Falls South,	61	.....	73	73	33	85	2
66 Norwood	97	.....	80	80	65	107	.....
67 Oakville	93	.....	64	64	83	128	.....
68 Omemee	30	.....	.....	.....	34	49	.....
69 Orangeville	185	4	114	114	148	214	9
70 Oshawa	136	2	103	103	76	137	.....
71 Paris	90	4	79	79	61	100	.....
72 Parkhill	79	.....	115	115	83	147	4
73 Parry Sound	112	.....	106	106	60	108	1
74 Pembroke	137	1	125	128	72	162	1
75 Penetanguishene	73	.....	61	61	50	88	.....
76 Petrolea	145	.....	142	142	57	55	70
77 Plantagenet	33	.....	60	60	47	75	.....
78 Port Dover	34	.....	46	46	28	46	.....
79 Port Elgin	92	.....	75	75	80	105	.....
80 Port Hope	148	.....	89	89	138	138	3
81 Port Perry	102	.....	100	100	68	102	3
82 Port Rowan	47	.....	37	37	32	47	.....
83 Prescott	141	.....	105	10	56	134	3
84 Richmond Hill	91	.....	63	63	52	85	.....
85 Rockland	43	.....	32	32	50	50	.....
86 Sault Ste. Marie	259	.....	221	221	165	288	3
87 Shelburne	111	.....	80	80	86	116	.....
88 Simcoe	125	2	160	160	140	180	8
89 Smithville	49	.....	59	59	64	87	.....
90 Stirling	121	.....	102	102	98	130	.....
91 Streetsville	58	.....	43	43	39	52	.....
92 Sudbury	93	.....	53	53	73	120	9
93 Sydenham	116	.....	123	123	98	146	2
94 Thorold	64	.....	41	40	51	87	.....
95 Tillsonburg	102	1	113	113	156	156	.....
96 Toronto, Commerce and Finance	.....	.....	.....	.....	156	427	.....
97 Toronto, North	181	4	100	100	165	165	8
98 Trenton	150	.....	75	75	167	167	.....
99 Uxbridge	143	.....	125	125	72	173	1
100 Vienna	22	.....	40	40	34	34	.....
101 Walkerton	83	.....	82	82	78	104	5
102 Wardsville	50	.....	45	45	47	60	.....
103 Waterdown	82	.....	65	65	50	82	.....
104 Waterford	66	.....	51	51	56	77	.....
105 Watford	137	.....	106	106	115	147	8
106 Welland	177	1	172	172	129	228	3
107 Weston	10	5	94	94	75	153	4
108 Whitby	96	1	89	89	69	122	6
109 Wiarton	68	.....	75	75	41	99	3
110 Williamstown	120	.....	116	116	73	125	7
111 Winchester	85	.....	7	7	97	147	7
112 Wingham	143	6	157	157	114	181	16
1 Totals, High Schools	12,086	73	9,856	10,025	9,275	14,046	447
2 Totals, Collegiate Institutes	16,511	618	10,995	10,902	9,601	15,162	450
3 Grand Totals, 1915	28,597	691	20,851	20,927	18,876	29,208	897
4 Grand Totals, 1914	25,989	553	19,008	19,008	17,726	28,524	809
5 Increases	2,608	138	1,843	1,919	1,150	684	88
6 Decreases	.....	.....	.....	.....	.....	.....	.....
7 Percentages	74.42	1.79	54.26	54.46	49.12	76.01	2.33

AND HIGH SCHOOLS—Continued
AND IN THE VARIOUS SUBJECTS, ETC.—Concluded

	Various Subjects—Concluded						Special Courses				
	Writing	Bookkeeping	Stenography	Typewriting	Art	Physical Culture	Commercial	Agriculture	Manual Training	Household Science	Art (Middle School)
65	78	54	31	31	65	118	31	41	.....	56	.....
66	80	80	.....	.....	80	107	.....	.....	.....	.....	.....
67	50	8	8	16	59	137	.....	60	.....	.....	.....
68	31	31	.....	.....	31	49	.....	.....	.....	.....	.....
69	110	109	.....	.....	101	221	.....	.....	.....	.....	12
70	181	74	74	74	99	222	74	.....	.....	.....	11
71	80	32	32	32	78	138	.....	.....	.....	.....	.....
72	64	110	7	10	118	147	7	.....	.....	.....	8
73	72	15	.....	.....	105	137	.....	.....	.....	.....	.....
74	116	64	38	38	77	204	37	.....	.....	.....	.....
75	38	56	15	22	61	88	6	.....	.....	.....	.....
76	148	65	.....	.....	148	197	.....	.....	.....	.....	.....
77	60	60	.....	.....	60	75	.....	.....	.....	.....	.....
78	46	24	.....	.....	46	51	.....	.....	.....	.....	.....
79	75	.....	.....	.....	81	105	.....	.....	.....	.....	.....
80	152	132	71	81	86	238	71	.....	.....	.....	21
81	93	57	.....	.....	95	108	.....	.....	.....	.....	.....
82	37	26	.....	.....	37	47	.....	.....	.....	.....	.....
83	80	25	14	18	105	149	.....	.....	.....	.....	.....
84	69	67	.....	.....	72	130	.....	.....	.....	.....	5
85	17	17	.....	.....	32	50	.....	.....	.....	.....	.....
86	218	26	32	32	231	303	.....	.....	.....	.....	.....
87	80	.....	.....	.....	86	115	.....	.....	.....	.....	.....
88	160	90	10	29	140	225	.....	.....	.....	.....	35
89	25	.....	.....	.....	59	89	.....	.....	.....	.....	.....
90	64	.....	.....	.....	102	130	.....	.....	.....	.....	.....
91	51	49	6	12	57	67	.....	.....	.....	.....	.....
92	105	26	26	26	74	160	.....	.....	.....	.....	.....
93	121	.....	.....	.....	121	147	.....	.....	.....	.....	.....
94	75	28	.....	33	69	87	.....	.....	.....	.....	.....
95	41	.....	.....	.....	120	158	.....	.....	.....	.....	13
96	583	583	583	323	65	.....	583	.....	.....	.....	23
97	100	100	.....	.....	100	199	.....	.....	.....	.....	.....
98	136	15	.....	.....	55	176	.....	.....	.....	.....	.....
99	143	.....	.....	.....	143	179	.....	.....	.....	.....	.....
100	40	31	.....	.....	40	46	.....	.....	.....	.....	.....
101	94	11	11	11	73	140	.....	.....	.....	.....	.....
102	45	.....	.....	.....	45	60	.....	.....	.....	.....	.....
103	32	32	.....	.....	65	82	.....	.....	.....	.....	.....
104	51	.....	.....	.....	51	77	.....	.....	.....	.....	.....
105	98	.....	.....	.....	98	155	.....	.....	.....	.....	1
106	176	56	50	50	180	263	.....	.....	.....	.....	12
107	65	55	.....	.....	104	154	.....	.....	.....	.....	18
108	83	37	.....	.....	82	126	.....	.....	.....	.....	10
109	84	23	.....	35	81	100	.....	.....	.....	.....	9
110	54	78	.....	.....	108	128	.....	.....	.....	.....	.....
111	56	56	.....	.....	127	151	.....	71	.....	.....	19
112	137	70	.....	.....	151	216	.....	.....	.....	.....	14
1	10,180	5,369	1,358	1,289	10,149	15,581	1,010	501	33	171	306
2	10,823	5,022	2,817	2,284	10,952	21,831	2,397	377	2,666	3,108	676
3	21,003	10,391	4,175	3,573	21,101	37,412	3,407	878	2,699	3,279	982
4	19,306	8,851	3,717	3,484	19,000	34,353	3,026	615	2,677	3,316	1,024
5	1,697	1,540	458	89	,	3,059	381	263	22	.....	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	37	42
7	54.65	27.04	10.	9.29	54.91	97.36	8.86	2.28	7.02	8.53	2.55

COLLEGIATE INSTITUTES AND
III. TABLE M—MISCELLANEOUS

Collegiate Institutes	Brick or Stone School House	Number of Acres in Playground	Schools under Board of Education	Approved Schools—Grade I and Grade II	Value of Library	Value of Scientific Apparatus	Value of Biological Specimens
					$	$	$
1 Barrie	B	3	1	I	645	823	90
2 Kitchener (Berlin)	B	4 3/5	.....	.....	1,730	1,439	201
3 Brantford	B	3 1/2	1	II	981	1,141	111
4 Brockville	S	3	.....	I	997	1,279	103
5 Chatham	B	1 1/4	1	II	1,119	2,327	119
6 Clinton	B	3	.....	II	961	1,116	75
7 Cobourg	B	1	.....	.....	1,771	1,462	162
8 Collingwood	B	2	1	.....	800	836	76
9 Fort William	B	1 3/4	1	II	1,114	810	231
10 Galt	S	8 1/4	.....	.....	1,200	1,573	285
11 Goderich	B	10 1/4	.....	.....	1,036	792	107
12 Guelph	S	4 1/2	1	.....	1,087	1,905	169
13 Hamilton	B & S	1 1/2	1	I	1,843	2,437	219
14 Ingersoll	B	2	1	II	865	935	91
15 Kingston	B	2	1	.....	1,160	1,244	82
16 Lindsay	B	3/4	1	II	1,795	1,522	252
17 London	B	3	1	.....	1,171	3,263	172
18 Morrisburg	B	11 1/2	1	.....	622	1,275	98
19 Napanee	B	3	1	II	1,036	920	101
20 Niagara Falls	B	5 3/4	.....	I	1,072	1,137	86
21 North Bay	B	2 1/2	.....	I	631	1,093	102
22 Orillia	B	2	.....	II	790	1,005	47
23 Ottawa	S	3/4	.....	.....	2,785	1,697	470
24 Owen Sound	B	3	1	I	1,582	1,568	100
25 Perth	B	4	1	II	1,037	1,033	51
26 Peterborough	B	1 1/2	1	.....	1,171	1,069	182
27 Picton	B	2 3/4	.....	I	911	1,305	100
28 Port Arthur	S	3	1	I	1,044	1,782	53
29 Renfrew	B	2 1/2	1	II	745	720	99
30 Ridgetown	B	1 3/4	.....	.....	806	1,267	98
31 St. Catharines	B	3/4	.....	.....	992	1,505	190
32 St. Mary's	B	1 1/2	.....	II	1,025	1,434	189
33 St. Thomas	B	2 1/2	1	.....	1,284	2,045	150
34 Sarnia	B	2 1/2	1	II	1,009	1,404	112
35 Seaforth	B	2 3/4	.....	II	869	785	54
36 Smith's Falls	B	4 1/2	1	I	608	1,406	103
37 Stratford	B	10	.....	.....	1,316	1,575	500
38 Strathroy	B	9	.....	.....	1,107	907	51
39 Toronto, Harbord	B	2 1/2	1	.....	1,347	5,437	1,308
40 Toronto, Humberside	B	6	1	I	2,033	3,106	374
41 Toronto, Jarvis	B	1 3/4	1	.....	2,164	4,380	656
42 Toronto, Malvern Avenue	B	3	1	II	1,245	2,417	239
43 Toronto, Oakwood	B & S	5	1	.....	2,095	3,744	1,244
44 Toronto, Parkdale	B	1 1/2	1	.....	2,235	3,282	372
45 Toronto, Riverdale	B & S	4 1/2	1	.....	1,517	2,525	570
46 Vankleek Hill	B	2 1/2	.....	II	804	985	108
47 Windsor	B	2 1/3	1	I	1,540	1,508	130
48 Woodstock	B	1	1	II	1,391	1,543	94
Totals	.....	.....	30	11 I, 16 II	59,088	80,763	10,576
High Schools							
1 Alexandria	B	1 3/4	.....	II	624	619	105
2 Alliston	B	4	.....	.....	379	634	54
3 Almonte	S	2	1	.....	618	457	30
4 Amherstburg	B	1 1/2	.....	.....	233	343	15
5 Arnprior	B	1	1	I	640	608	101

HIGH SCHOOLS—Continued
INFORMATION

General Equipment

	Charts, Maps and Globes	Art Models	Typewriters	Gymnasium (not including equipment)	Equipment of Gymnasium or Equipment for Physical Culture	Museum	Aquarium, Herbarium, etc.	Pictures	Total value of General Equipment
	$	$	$	$	$	$	$	$	$
1	113	86	250	1,200	401	.....	.....	.....	3,608
2	173	64	1,433	1,000	613	196	5	416	7,270
3	419	108	1,117	10,000	367	.....	.....	311	14,555
4	192	117	561	2,500	413	.....	23	134	6,319
5	263	85	1,250	2,500	288	.....	.....	177	8,128
6	135	75	225	875	68	22	.....	131	3,683
7	219	98	910	3,000	396	5,000	.....	355	13,373
8	163	55	400	1,200	217	.....	.....	110	3,857
9	166	213	1,320	16,000	351	.....	.....	40	20,245
10	263	84	1,100	.....	153	662	25	1,025	6,370
11	103	77	400	2,500	264	.....	.....	183	5,462
12	274	52	750	2,800	972	100	75	625	8,809
13	407	100	250	8,000	944	125	.....	774	15,099
14	104	79	200	800	304	.....	15	164	3,557
15	233	60	720	4,500	465	35	.....	.....	8,499
16	87	98	400	4,000	508	250	.....	140	9,052
17	321	122	1,290	10,500	714	.....	.....	500	18,053
18	132	58	250	980	279	150	5	125	3,974
19	226	101	420	922	389	.....	.....	119	4,234
20	114	81	750	10,000	355	.....	.....	150	13,745
21	164	151	300	10,000	404	.....	.....	15	12,860
22	158	92	450	1,800	288	.....	.....	150	4,780
23	189	200	1,695	7,000	1,138	300	.....	325	15,799
24	139	105	325	3,000	244	100	.....	65	7,228
25	148	50	200	7,000	233	500	.....	127	10,379
26	86	97	723	.....	.....	150	50	294	3,822
27	248	102	740	5,000	271	.....	25	718	9,420
28	303	104	800	15,000	444	143	.....	231	19,904
29	95	87	300	5,000	234	.....	.....	.....	7,280
30	132	60	300	900	256	.....	6	.....	3,825
31	150	79	535	8,000	384	125	6	185	12,151
32	116	101	100	6,000	506	40	.....	40	9,551
33	74	130	1,140	1,518	470	.....	.....	465	7,276
34	119	94	500	1,300	240	.....	.....	180	4,958
35	78	82	375	600	180	.....	.....	90	3,113
36	88	85	400	7,688	58	.....	.....	84	10,520
37	171	71	850	2,000	262	500	.....	254	7,499
38	92	56	150	3,500	377	.....	.....	.....	6,240
39	212	109	.....	10,000	.....	.....	20	500	18,933
40	140	116	90	.....	578	.....	.....	415	6,852
41	167	103	115	7,000	250	677	75	347	15,934
42	183	158	.....	5,000	581	.....	.....	200	10,023
43	249	112	130	10,000	499	.....	.....	443	18,516
44	156	139	25	10,000	320	.....	.....	307	16,836
45	127	100	90	10,000	565	300	50	335	16,179
46	64	103	260	3,200	54	.....	.....	65	5,643
47	228	116	1,415	3,000	444	.....	.....	250	8,631
48	238	88	550	.....	.....	94	.....	227	4,225
	8,421	4,703	26,554	226,783	17,741	9,469	380	11,791	456,269
1	64	85	.....	.....	.....	.....	.....	.....	1,497
2	54	35	.....	.....	.....	.....	.....	.....	1,156
3	39	57	.....	.....	.....	.....	.....	25	1,226
4	77	23	150	.....	.....	.....	.....	.....	841
5	97	75	.....	.....	.....	.....	.....	166	1,687

COLLEGIATE INSTITUTES AND
III. TABLE M—MISCELLANEOUS

Collegiate Institutes	Value of Manual Training Department Equipment				Value of Household Science Department Equipment			Value of Agricultural Department Equipment	Value of Art Equipment (Middle School)
	Woodwork	Woodturning	Forging	Machine Shop Practice	Cookery, Sanitation and Hygiene	Handwork and Machine Sewing	Laundry Work		
	$	$	$	$	$	$	$	$	$
1 Barrie									
2 Kitchener (Berlin)	914	215	647	628	1,647				
3 Brantford	924	239	748	325	596	118			
4 Brockville									
5 Chatham	768				1,392				
6 Clinton								85	75
7 Cobourg									
8 Collingwood									23
9 Fort William									
10 Galt	1,099	299			1,310	103	22		
11 Goderich									
12 Guelph									
13 Hamilton									25
14 Ingersoll	391	179	83	399	504	65			
15 Kingston									
16 Lindsay								228	
17 London	936				785	300			
18 Morrisburg								200	
19 Napanee								1,260	
20 Niagara Falls									
21 North Bay									
22 Orillia									
23 Ottawa									
24 Owen Sound	505	350			731	12			
25 Perth									
26 Peterborough									
27 Picton								131	
28 Port Arthur	571	240			1,591	483	52		
29 Renfrew									
30 Ridgetown									
31 St. Catharines									54
32 St. Mary's									
33 St. Thomas									230
34 Sarnia									
35 Seaforth									
36 Smith's Falls	1,359	364			582			60	
37 Stratford	600	300	200	400	300				
38 Strathroy									
39 Toronto, Harbord									
40 Toronto, Humberside									46
41 Toronto, Jarvis									
42 Toronto, Malvern Avenue									
43 Toronto, Oakwood	1,968	340			361	8	72		
44 Toronto, Parkdale									405
45 Toronto, Riverdale	800			*1,589	†1,834				5
46 Vankleek Hill								21	
47 Windsor									
48 Woodstock	787	396	835	2,104	915	67			22
Totals	11,622	2,922	2,513	5,445	12,548	1,156	146	1,985	885
High Schools									
1 Alexandria									
2 Alliston									
3 Almonte									
4 Amherstburg	188								
5 Arnprior									

*Tools and machinery for all work. †Household Science Equipment.

HIGH SCHOOLS—Continued
INFORMATION—Continued

	Total value of Special Equipment as per preceding nine columns	Religious and other Exercises						Destination of Pupils							
		Schools using authorized Scripture Readings	Schools using the Bible	Schools in which Passages are Memorized	Schools opened with Prayer	Schools closed with Prayer	Commencement Exercises	Commerce	Agriculture	Law, Medicine or the Church	Teaching	The Trades	Other occupations	Other High Schools or Collegiates	Without occupation
1	.....	.....	....	.....	1	.....	....	9	8	8	7	6	17	.....	8
2	4,051	1	1	.....	1	.....	1	22	6	9	11	22	.....	.....	24
3	2,950	.....	1	.....	1	1	1	51	6	1	14	19	37	2	6
4	.....	.....	....	.....	1	.....	1	11	5	6	20	10	12	3	11
5	2,160	1	1	.....	1	.....	1	44	10	10	17	7	6	9	11
6	160	1	1	.....	1	.....	1	3	14	....	14	2	19	8	....
7	.....	1	1	.....	1	.....	....	6	9	3	7	1	16	1	....
8	23	.....	....	.....	1	.....	1	9	2	3	11	17	23	4	5
9	.....	.....	1	.....	1	.....	1	22	2	1	10	5	3	7	....
10	2,833	.....	1	.....	1	.....	1	54	11	1	15	6	19	11	21
11	.....	1	....	.....	1	.....	1	12	6	1	21	.....	8	13	10
12	.....	.....	....	.....	1	.....	1	24	11	1	23	2	40	13	19
13	25	1	1	.....	1	.....	1	30	7	25	38	70	64	8	63
14	1,621	1	....	.....	1	.....	1	16	18	1	4	7	7	5	9
15	.....	.....	1	.....	1	.....	....	53	17	15	15	8	25	13	10
16	228	.....	....	.....	1	.....	1	24	17	1	30	3	9	6	18
17	2,021	1	....	.....	1	.....	1	86	11	21	29	28	45	22	64
18	200	.....	1	.....	1	.....	....	1	1	4	8	.....	3	2	2
19	1,260	1	1	.....	1	.....	1	9	11	1	14	5	11	4	13
20	.....	.....	1	.....	....	.....	1	4	1	5	3	10	22	10	12
21	.....	.....	....	.....	1	.....	....	4	....	3	10	12	28	2	2
22	.....	.....	1	.....	1	.....	....	19	3	2	18	8	22	5	12
23	.....	1	....	.....	1	.....	1	95	10	14	19	27	104	10	56
24	1,598	.....	....	.....	1	.....	1	33	23	11	40	5	28	7	15
25	.....	1	....	.....	1	.....	1	9	5	2	12	.....	8	.....	5
26	.....	.....	....	.....	1	.....	1	24	7	7	17	22	25	28	17
27	131	.....	....	.....	1	.....	1	8	26	3	11	1	15	7	1
28	2,937	1	....	.....	1	.....	1	27	1	1	1	.....	10	6	7
29	.....	1	....	.....	1	.....	1	10	18	3	52	.....	6	2	3
30	.....	1	1	.....	1	.....	1	6	2	2	5	.....	3	9	7
31	54	.....	1	.....	1	.....	1	34	10	2	6	4	29	23	27
32	.....	1	1	.....	1	.....	1	6	9	....	14	4	6	4	10
33	230	.....	1	.....	1	.....	1	62	10	12	22	10	7	10	1
34	.....	.....	1	.....	1	.....	1	25	3	6	9	17	14	12	10
35	.....	1	....	.....	1	.....	....	.....	....	2	10	1	4	1	2
36	2,365	.....	....	.....	1	.....	....	13	5	7	15	3	10	4	10
37	1,800	.....	....	.....	1	.....	1	30	8	20	25	15	30	5	....
38	.....	1	1	.....	1	.....	1	7	5	....	.....	.....	15	.....	14
39	.....	1	1	.....	1	.....	1	80	....	20	25	.....	21	40	70
40	46	1	1	.....	1	.....	1	20	2	25	42	3	42	15	14
41	.....	1	....	.....	1	.....	1	15	2	....	9	.....	151	15	....
42	.....	1	1	.....	1	.....	1	14	13	9	7	8	15	8	11
43	2,749	1	1	.....	1	.....	1	18	....	24	17	2	21	9	15
44	405	.....	1	.....	1	.....	1	47	4	13	18	14	59	39	16
45	4,228	1	1	.....	1	1	1	40	3	12	11	8	15	34	28
46	21	.....	....	.....	1	.....	1	5	7	1	6	5	3	2	....
47	.....	.....	....	.....	1	.....	1	56	5	12	7	4	29	5	15
48	5,126	.....	....	.....	1	.....	1	27	11	3	24	4	11	10	19
	39,222	23	25	.....	47	2	40	1,224	365	333	763	405	1,117	453	693
1	.....	.....	....	.....	1	.....	....	.....	7	1	5	2	17	3	2
2	.....	1	....	.....	1	.....	....	7	5	3	9	1	5	6	9
3	.....	.....	....	.....	1	.....	....	6	....	2	3	2	9	4	. .
4	188	1	1	.....	1	.....	1	2	1	....	1	2	[illegible]		
5	.....	.....	....	.....	1	.....	1	10	3	1	10	2	[illegible]	8	

COLLEGIATE INSTITUTES AND
III. TABLE M—MISCELLANEOUS

High Schools	Brick or Stone School House	Number of Acres in Playground	Schools under Board of Education	Approved Schools—Grade I and Grade II	Value of General Library	Scientific Apparatus	Biological Specimens	Charts, Maps and Globes
					$	$	$	$
6 Arthur	B	7	....	.....	475	781	27	69
7 Athens	S	2	....	.....	653	784	35	64
8 Aurora	B	1	....	II	460	583	92	109
9 Avonmore	B	2	....	.....	211	159	.....	70
10 Aylmer	B	4½	....	II	1,090	943	220	268
11 Beamsville	B & F	....	1	.....	399	493	12	81
12 Belleville	B	2¼	1	II	879	1,528	129	80
13 Bowmanville	B	3½	....	II	672	642	130	52
14 Bradford	B	5	....	II	329	422	52	76
15 Brampton	B	5	....	.....	561	795	75	65
16 Brighton	B	¾	1	.....	412	720	84	182
17 Caledonia	B	1	1	.....	523	809	77	96
18 Campbellford	B	¾	1	.....	702	820	93	82
19 Carleton Place	S	1	1	.....	916	602	68	67
20 Cayuga	B	1½	1	II	349	425	53	51
21 Chatsworth	B	1½	....	.....	307	305	47	51
22 Chesley	B	4	....	II	448	531	62	175
23 Chesterville	B	3	....	.....	378	463	9	72
24 Colborne	B	¾	1	II	546	625	54	60
25 Cornwall	B	2	....	II	772	810	105	149
26 Deseronto	B	5½	....	II	513	560	49	87
27 Dundalk	B	2	....	.....	222	244	21	64
28 Dundas	B	....	1	.....	767	992	61	85
29 Dunnville	B & S	4½	1	I	569	826	111	70
30 Durham	B	¾	....	.....	404	425	50	78
31 Dutton	B	1	....	.....	377	611	78	52
32 Elora	S	⅓	1	.....	302	379	1,005	50
33 Essex	B	3¼	....	II	451	758	91	73
34 Fergus	S	⅝	1	.....	626	530	75	66
35 Flesherton	B	2	....	II	321	342	52	54
36 Forest	B	2	....	II	502	512	49	95
37 Gananoque	B	1	1	II	754	682	102	88
38 Georgetown	B	4½	....	II	442	539	148	106
39 Glencoe	B	2½	....	II	564	629	68	61
40 Gravenhurst	B	5	....	II	381	393	37	64
41 Grimsby	B	4	1	II	325	340	48	98
42 Hagersville	B	3½	....	II	521	630	51	82
43 Haileybury	B	5	....	II	751	2,147	90	77
44 Harriston	B	4	1	II	456	472	99	61
45 Hawkesbury	B	2	1	.....	508	333	52	53
46 Iroquois	B	⅔	....	.....	774	1,238	57	138
47 Kemptville	B	2	1	.....	459	691	33	68
48 Kenora	B	3	1	II	420	647	35	70
49 Kincardine	B	4	1	II	673	839	71	82
50 Leamington	B	1½	....	II	450	726	79	120
51 Listowel	B	2	....	.....	455	491	98	81
52 Lucan	B	3½	....	II	459	586	102	53
53 Madoc	B	1	....	II	467	876	105	68
54 Markdale	B	....	....	.....	301	311	24	48
55 Markham	B	2¼	....	II	477	674	102	99
56 Meaford	B	4½	....	I	723	1,281	120	110
57 Midland	B	6½	....	I	565	758	107	68
58 Mitchell	B	⅔	....	II	453	648	60	170
59 Morewood	B	3	....	.....	368	368	53	72
60 Mount Forest	B	2½	1	II	537	631	102	74
61 Newburgh	S	1½	1	.....	571	437	10	75
62 Newcastle	B	2	1	.....	389	534	43	52
63 Newmarket	B	2	....	II	485	644	89	182
64 Niagara	B	½	....	.....	278	212	12	72

HIGH SCHOOLS—Continued
INFORMATION—Continued

	Equipment								Value of Manual Training Department Equipment			
	Art Models	Typewriters	Gymnasium (not including equipment)	Equipment of Gymnasium or Equipment for Physical Culture	Museum	Aquarium, Herbarium, etc.	Pictures	Total value of General Equipment	Woodwork	Woodturning	Forging	Machine Shop Practice
	$	$	$	$	$	$	$	$	$			
6	49	.....	.....	50	15	....	.....	1,466	.....	.....	.....	.....
7	80	.....	.....	36	.....	....	100	1,752	.....	.....	.....	.....
8	76	.....	.....	.....	.....	....	100	1,420	.....	.....	.....	.....
9	35	.....	.....	.....	.....	....	6	481	.....	.....	.....	.....
10	85	140	680	105	179	....	125	3,835	.....	.....	.....	.....
11	36	.....	.....	12	.....	....	.....	1,033	.....	.....	.....	.....
12	76	540	.....	.....	.....	....	174	3,406	.....	.....	.....	.....
13	103	50	.....	47	85	....	309	2,090	.....	.....	.....	.....
14	56	20	.....	47	.....	....	25	1,027	.....	.....	.....	.....
15	76	.....	.....	22	25	....	60	1,679	.....	.....	.....	.....
16	55	.....	.....	.....	.....	....	.....	1,453	.....	.....	.....	.....
17	62	.....	.....	.....	.....	....	.....	1,567	.....	.....	.....	.....
18	84	.....	.....	.....	.....	....	150	1,931	.....	.....	.....	.....
19	68	.....	.....	.....	.....	....	35	1,756	.....	.....	.....	.....
20	73	.....	.....	.....	.....	....	80	1,031	.....	.....	.....	.....
21	51	.....	.....	.....	.....	....	13	774	.....	.....	.....	.....
22	72	.....	.....	.....	.....	....	50	1,338	.....	.....	.....	.....
23	40	.....	.....	.....	.....	....	.....	962	.....	.....	.....	.....
24	55	.....	.....	28	.....	....	5	1,373	.....	.....	.....	.....
25	84	1,070	.....	.....	.....	20	85	3,095	.....	.....	.....	.....
26	51	50	.....	158	.....	....	50	1,518	.....	.....	.....	.....
27	36	.....	.....	10	.....	....	.....	597	.....	.....	.....	.....
28	76	375	.....	48	.....	3	160	2,567	.....	.....	.....	.....
29	60	210	.....	7	.....	....	250	2,103	.....	.....	.....	.....
30	54	.....	.....	.....	.....	....	.....	1,011	.....	.....	.....	.....
31	77	.....	.....	.....	.....	....	44	1,239	.....	.....	.....	.....
32	49	205	.....	2	.....	....	.....	1,992	.....	.....	.....	.....
33	50	.....	.....	53	50	....	100	1,626	.....	.....	.....	.....
34	75	.....	.....	27	.....	....	35	1,434	.....	.....	.....	.....
35	52	.....	.....	27	.....	....	15	863	.....	.....	.....	.....
36	52	50	.....	38	49	....	25	1,372	.....	.....	.....	.....
37	77	366	.....	22	.....	....	448	2,539	.....	.....	.....	.....
38	71	65	.....	30	50	4	58	1,513	.....	.....	.....	.....
39	51	.....	.....	31	.....	....	20	1,424	.....	.....	.....	.....
40	50	120	.....	10	.....	500	25	1,580	.....	.....	.....	.....
41	65	.....	.....	55	.....	....	65	996	.....	.....	.....	.....
42	52	.....	.....	.....	.....	....	35	1,371	.....	.....	.....	.....
43	87	80	.....	38	.....	....	317	3,587	.....	.....	.....	.....
44	84	.....	.....	.....	.....	....	.....	1,172	.....	.....	.....	.....
45	63	.....	.....	5	.....	....	41	1,055	.....	.....	.....	.....
46	68	100	.....	.....	.....	....	.....	2,375	.....	.....	.....	.....
47	64	.....	.....	.....	.....	....	80	1,395	.....	.....	.....	.....
48	50	.....	2,500	.....	.....	....	.....	3,722	.....	.....	.....	.....
49	87	375	800	80	.....	....	180	3,187	.....	.....	.....	.....
50	57	.....	.....	47	.....	....	75	1,554	.....	.....	.....	.....
51	81	.....	.....	47	.....	....	30	1,283	.....	.....	.....	.....
52	79	90	.....	21	.....	5	25	1,420	.....	.....	.....	.....
53	76	.....	.....	30	.....	....	60	1,682	.....	.....	.....	.....
54	30	.....	.....	.....	.....	....	.....	714	.....	.....	.....	.....
55	50	.....	.....	.....	.....	....	60	1,462	.....	.....	.....	.....
56	77	6	1,404	324	22	....	435	4,502	.....	.....	.....	.....
57	85	95	.....	39	50	4	150	1,921	.....	.....	.....	.....
58	55	.....	550	187	.....	....	39	2,162	.....	.....	.....	.....
59	50	.....	.....	.....	.....	....	37	948	.....	.....	.....	.....
60	131	.....	.....	10	.....	....	.....	1,485	.....	.....	.....	.....
61	55	.....	.....	.....	.....	....	50	1,198	.....	.....	.....	.....
62	49	.....	.....	.....	.....	....	30	897	.....	.....	.....	.....
63	89	260	.....	114	.....	....	26	1,887	.....	.....	.....	.....
64	10	90	14	237	.....	....	.....	925	.....	.....	.....	.....

COLLEGIATE INSTITUTES AND
III TABLE M—MISCELLANEOUS

High Schools	Value of Household Science Department Equipment			Value of Agricultural Department Equipment	Value of Art Equipment (Middle School)	Total value of Special Equipment as per preceding nine columns
	Cookery, Sanitation and Hygiene	Handwork and Machine Sewing	Laundry Work			
	$	$	$	$	$	$
6 Arthur	.....	.....	.....	126	.....	126
7 Athens	.....	.....	.....	600	.....	600
8 Aurora	.....	.....	.....	.....	.....	.....
9 Avonmore	.....	.....	.....	.....	.....	.....
10 Aylmer	.....	.....	.....	.....	.....	.....
11 Beamsville	.....	.....	.....	.....	.....	.....
12 Belleville	857	78	50	.....	.....	985
13 Bowmanville	.....	.....	.....	309	.....	309
14 Bradford	.....	.....	.....	.....	.....	.....
15 Brampton	.....	.....	.....	.....	.....	.....
16 Brighton	.....	.....	.....	.....	.....	.....
17 Caledonia	.....	.....	.....	.....	.....	.....
18 Campbellford	.....	.....	.....	.....	.....	.....
19 Carleton Place	.....	.....	.....	.....	.....	.....
20 Cayuga	.....	.....	.....	.....	.....	.....
21 Chatsworth	.....	.....	.....	.....	.....	.....
22 Chesley	.....	.....	.....	.....	.....	.....
23 Chesterville	.....	.....	.....	.....	.....	.....
24 Colborne	.....	.....	.....	.....	.....	.....
25 Cornwall	.....	.....	.....	.....	.....	.....
26 Deseronto	.....	.....	.....	.....	.....	.....
27 Dundalk	.....	.....	.....	.....	.....	.....
28 Dundas	.....	.....	.....	.....	.....	.....
29 Dunnville	.....	.....	.....	.....	.....	.....
30 Durham	.....	.....	.....	.....	.....	.....
31 Dutton	.....	.....	.....	.....	.....	.....
32 Elora	.....	.....	.....	.....	.....	.....
33 Essex	.....	.....	.....	246	.....	246
34 Fergus	.....	.....	.....	.....	.....	.....
35 Flesherton	.....	.....	.....	.....	.....	.....
36 Forest	.....	.....	.....	.....	.....	.....
37 Gananoque	.....	.....	.....	.....	.....	.....
38 Georgetown	.....	.....	.....	.....	.....	.....
39 Glencoe	.....	.....	.....	.....	.....	.....
40 Gravenhurst	.....	.....	.....	.....	.....	.....
41 Grimsby	.....	.....	.....	.....	.....	.....
42 Hagersville	.....	.....	.....	57	.....	57
43 Haileybury	.....	.....	.....	.....	.....	.....
44 Harriston	.....	.....	.....	.....	.....	.....
45 Hawkesbury	.....	.....	.....	.....	.....	.....
46 Iroquois	.....	.....	.....	.....	.....	.....
47 Kemptville	.....	.....	.....	.....	.....	.....
48 Kenora	.....	.....	.....	.....	.....	.....
49 Kincardine	.....	.....	.....	.....	.....	.....
50 Leamington	.....	.....	.....	.....	.....	.....
51 Listowel	.....	.....	.....	.....	.....	.....
52 Lucan	.....	.....	.....	.....	.....	.....
53 Madoc	.....	.....	.....	.....	.....	.....
54 Markdale	.....	.....	.....	1,200	.....	1,200
55 Markham	.....	.....	.....	.....	.....	.....
56 Meaford	.....	.....	.....	.....	.....	.....
57 Midland	.....	.....	.....	.....	.....	.....
58 Mitchell	.....	.....	.....	.....	.....	.....
59 Morewood	.....	.....	.....	.....	.....	.....
60 Mount Forest	.....	.....	.....	.....	.....	.....
61 Newburgh	.....	.....	.....	.....	.....	.....
62 Newcastle	.....	.....	.....	.....	.....	.....
63 Newmarket	.....	.....	.....	805	.....	805
64 Niagara	.....	.....	.....	.....	.....	.....

HIGH SCHOOLS—Continued
INFORMATION—Continued

	Religious and other Exercises						Destination of Pupils							
	Schools using authorized Scripture Readings	Schools using the Bible	Schools in which Passages are Memorized	Schools opened with Prayer	Schools closed with Prayer	Commencement Exercises	Commerce	Agriculture	Law, Medicine or the Church	Teaching	The Trades	Other occupations	Other High Schools or Collegiates	Without occupation
6	.....	.....	.....	1	.....	1	3	10	3	4	1	1	6	....
7	1	.....	.....	1	.....	1	2	12	1	13	5	2	3	12
8	.....	1	.....	1	.....	.....	2	3	....	2	2	12	2	1
9	.....	.....	.....	1	.....	.....	.....	.....	....	3	.....	.....	1	10
10	.....	1	.....	1	.....	.....	9	19	1	10	6	3	1	1
11	.....	1	.....	1	.....	1	4	5	1	....	.....	6	10	1
12	1	1	.....	1	.....	1	10	3	....	6	4	31	8	1
13	.....	1	.....	1	.....	1	3	4	3	8	4	3	.....	4
14	.....	1	.....	1	.....	1	3	10	1	6	.....	5	5	4
15	.....	.....	.....	1	.....	1	3	9	3	12	5	.....	2	11
16	.....	1	.....	1	.....	.....	3	5	....	4	2	3	7	....
17	1	1	.....	1	.....	1	.....	20	....	8	.....	1	2	....
18	1	.....	.....	1	.....	1	4	14	....	7	4	6	7	8
19	.....	.....	.....	1	.....	1	2	10	....	12	3	10	3	8
20	.....	.....	.....	1	.....	1	1	6	1	4	.....	5	.....	2
21	1	1	.....	1	.....	.....	1	3	....	....	.....	.....	1	3
22	.....	1	.....	1	.....	.....	3	4	2	11	2	6	2	2
23	.....	.....	.....	1	.....	1	3	5	....	6	1	5	4	10
24	1	.....	.....	1	.....	.....	.....	3	....	3	1	9	.....	....
25	1	.....	.....	1	.....	1	10	5	8	12	7	18	4	11
26	.....	.....	.....	1	.....	.....	7	5	....	....	6	7	3	....
27	.....	1	.....	1	1	1	.....	14	....	8	.....	5	2	....
28	.....	.....	.....	1	.....	1	6	3	....	2	2	6	9	6
29	1	1	.....	1	.....	1	7	10	3	3	7	2	2	2
30	.....	1	.....	1	.....	1	3	5	....	12	3	5	3	3
31	.....	1	.....	1	.....	.....	4	4	1	7	1	6	1	....
32	.....	1	.....	1	.....	1	5	5	2	....	3	7	8	1
33	1	.....	.....	1	.....	1	10	5	3	8	1	9	5	....
34	.....	.....	.....	1	.....	1	11	1	4	9	4	8	.....	....
35	1	.....	.....	1	.....	1	2	1	1	12	1	.....	2	....
36	.....	.....	.....	1	.....	.....	4	5	2	10	1	5	3	3
37	1	.....	.....	1	.....	.....	10	5	4	4	3	13	4	....
38	1	1	.....	1	.....	1	3	3	....	5	.....	1	8	11
39	.....	1	.....	1	.....	.....	.....	11	....	13	1	6	2	1
40	.....	1	.....	1	.....	.....	2	1	....	1	.....	4	1	1
41	.....	1	.....	1	.....	1	7	6	2	5	1	10	11	4
42	.....	.....	.....	1	.....	1	.....	17	1	6	3	3	5	2
43	.....	.....	.....	1	.....	1	11	.....	1	2	7	16	10	....
44	.....	.....	.....	1	.....	.....	1	4	....	6	1	4	1	1
45	.....	1	.....	1	.....	1	3	3	....	2	3	6	3	1
46	.....	.....	.....	1	.....	1	3	6	4	7	.....	3	4	3
47	1	1	.....	1	.....	.....	7	8	1	13	1	14	11	7
48	1	1	.....	1	.....	.....	12	1	1	3	2	13	5	6
49	1	1	.....	1	.....	1	3	15	1	8	2	9	4	4
50	.....	.....	.....	1	.....	.....	9	8	....	4	2	19	4	....
51	.....	.....	.....	1	.....	.....	5	9	2	8	1	10	4	3
52	.....	1	.....	1	.....	.....	3	3	2	6	.....	2	5	....
53	.....	1	.....	1	.....	.....	6	4	4	24	.....	9	5	3
54	.....	1	.....	1	.....	.....	2	10	1	5	2	2	8	....
55	.....	.....	.....	1	.....	1	8	4	4	7	1	5	6	10
56	.....	.....	.....	1	.....	.....	9	7	2	12	3	9	3	2
57	.....	.....	.....	1	.....	1	3	.....	3	8	5	18	1	6
58	1	.....	.....	1	.....	1	1	6	....	5	1	5	3	2
59	1	1	.....	1	.....	.....	1	8	....	5	1	3	1	....
60	1	.....	.....	1	.....	1	8	3	2	13	4	4	6	4
61	1	.....	.....	1	.....	1	1	9	1	8	.....	3	2	....
62	1	1	.....	1	.....	.....	4	.....	....	1	.....	1	4	2
63	.....	1	.....	1	.....	1	10	14	3	12	15	8	3	3
64	1	1	.....	1	.....	.....	2	.....	....	1	.....	2	5	6

COLLEGIATE INSTITUTES AND
III. TABLE M—MISCELLANEOUS

High Schools	Brick or Stone School House	Number of Acres in Playground	Schools under Board of Education	Approved Schools—Grade I and Grade II	Value of General Library	Scientific Apparatus	Biological Specimens	Charts, Maps and Globes
					$		$	$
65 Niagara Falls South	B	2	.....	I	464	511	108	102
66 Norwood	B	8	1	II	416	558	63	81
67 Oakville	B	4	1	II	533	615	65	223
68 Omemee	B	1¼	1	.....	341	337	50	58
690rangeville	B	4	.....	.....	739	1,164	84	141
70 Oshawa	B	3	1	I	762	1,260	138	194
71 Paris	B	4	1	II	582	743	86	118
72 Parkhill	B	5	1	.....	524	804	38	45
73 Parry Sound	B	1¼	.....	II	439	529	10	91
74 Pembroke	B	10	1	II	590	948	116	112
75 Penetanguishene	B	10	.....	I	421	793	157	72
76 Petrolea	B	2	.....	.....	550	762	39	51
77 Plantagenet	B	2	.....	.....	216	257	7	21
78 Port Dover	B	2	1	.....	474	419	16	99
79 Port Elgin	B		.....	.....	307	453	42	108
80 Port Hope	B	1½	.....	II	944	1,012	75	56
81 Port Perry	B	3	1	.....	452	756	29	58
82 Port Rowan	B	2¼	1	.....	399	433	27	61
83 Prescott	B	1⅛	1	II	433	664	101	109
84 Richmond Hill	B	1	1	.....	444	546	84	203
85 Rockland	B	1½	.....	II	393	386	66	77
86 Sault Ste. Marie	B	6	.....	II	701	856	90	72
87 Shelburne	B	1½	1	.....	387	525	26	109
88 Simcoe	B	6	1	II	649	870	141	171
89 Smithville	B	2½	.....	.....	359	521	20	53
90 Stirling	B	2	1	II	455	495	36	68
91 Streetsville	B		.....	II	329	388	50	69
92 Sudbury	B	5	.....	II	589	1,625	103	69
93 Sydenham	S	2½	.....	II	474	666	110	82
94 Thorold	B	2¼	.....	.....	320	616	32	125
95 Tillsonburg	B	2½	.....	II	471	844	85	230
96 Toronto, Commerce & Finance	B		1	.....	1,559	2,024	.....	63
97 Toronto, North	B	4	1	.....	372	765	188	58
98 Trenton	B	1¾	1	.....	626	627	91	191
99 Uxbridge	B		1	.....	488	480	77	110
100 Vienna	B	6½	1	.....	506	337	.....	95
101 Walkerton	B	1¼	.....	II	462	618	103	73
102 Wardsville	B	1½	1	.....	301	328	44	63
103 Waterdown	S	3	.....	.....	262	350	26	52
104 Waterford	B	3	.....	.....	524	626	44	73
105 Watford	B	2	1	II	402	910	52	165
106 Welland	B	3	.....	.....	388	971	60	65
107 Weston	B	4	.....	II	474	890	95	252
108 Whitby	B	1	1	.....	638	949	49	100
109 Wiarton	S	2	.....	.....	522	444	35	63
110 Williamstown	B	3	.....	II	462	599	102	73
111 Winchester	B	2¼	.....	.....	449	480	33	65
112 Wingham	B	3	.....	II	500	773	101	176
1 Totals, High Schools	.....	.....	47	7 I, 51 II	56,726	74,164	8,562	10,281
2 Totals, Collegiate Institutes	.....	.....	30	11 I, 16 II	59,088	80,763	10,576	8,421
3 Grand Totals, 1915	.....	.....	77	18 I, 67 II	115,814	154,927	19,138	18,702
4 Grand Totals, 1914	.....	.....	79	15 I, 65 II	115,760	162,229	17,496	18,906
5 Increases	.....	.....	.....	3 I, 2 II	54	.....	1,642	.....
6 Decreases	.....	.....	2	.....	.....	7,302	.....	204
7 Percentages	.....	.....	48.12	*	17.48	23.39	2.89	2.82

*11.25 per cent., Grade I; 41.87, Grade II; 46.87 not approved.

HIGH SCHOOLS—Continued
INFORMATION—Continued

	Equipment								Value of Manual Training Department Equipment			
	Art Models	Typewriters	Gymnasium (not including equipment)	Equipment of Gymnasium or Equipment for Physical Culture	Museum	Aquarium, Herbarium, etc.	Pictures	Total value of General Equipment	Woodwork	Woodturning	Forging	Machine Shop Practice
	$	$	$	$	$	$	$	$	$	$	$	$
65	76	350	7,500	454	.....	....	25	9,590	.....	.....	.....	.....
66	56	.....	.....	.....	.....	....	40	1,214	.....	.....	.....	.....
67	58	165	.....	3	.....	....	75	1,737	.....	.....	.....	.....
68	67	.....	.....	22	.....	....	20	895	.....	.....	.....	.....
69	60	.....	2,500	292	.....	....	30	5,010	.....	.....	.....	.....
70	83	622	.....	73	.....	50	207	3,389	.....	.....	.....	.....
71	72	180	.....	.....	.....	....	63	1,844	.....	.....	.....	.....
72	53	350	.....	.....	.....	....	.....	1,814	.....	.....	.....	.....
73	59	.....	.....	.....	.....	3	15	1,146	.....	.....	.....	.....
74	73	300	.....	40	.....	....	90	2,269	.....	.....	.....	.....
75	60	180	.....	31	6	12	87	1,819	.....	.....	.....	.....
76	50	.....	.....	.....	.....	....	20	1,472	.....	.....	.....	.....
77	20	.....	.....	20	.....	....	.....	541	.....	.....	.....	.....
78	52	.....	.....	.....	.....	....	.....	1,060	.....	.....	.....	.....
79	59	100	.....	8	.....	....	61	1,138	.....	.....	.....	.....
80	59	495	.....	39	.....	....	200	2,880	.....	.....	.....	.....
81	66	.....	.....	35	.....	....	.....	1,396	.....	.....	.....	.....
82	46	.....	.....	21	.....	....	15	1,002	.....	.....	.....	.....
83	76	150	.....	44	.....	....	74	1,651	.....	.....	.....	.....
84	67	.....	.....	.....	.....	....	61	1,405	.....	.....	.....	.....
85	53	.....	.....	.....	.....	....	10	985	.....	.....	.....	.....
86	75	380	.....	12	15	....	150	2,351	426	270	212	2,991
87	50	.....	.....	26	.....	....	15	1,138	.....	.....	.....	.....
88	74	150	.....	.....	.....	....	.....	2,055	.....	.....	.....	.....
89	50	.....	.....	17	.....	....	.....	1,020	.....	.....	.....	.....
90	60	.....	.....	.....	.....	8	50	1,172	.....	.....	.....	.....
91	50	180	.....	.....	.....	....	120	1,186	.....	.....	.....	.....
92	89	200	2,500	416	.....	....	40	5,631	.....	.....	.....	.....
93	76	.....	.....	26	.....	....	31	1,465	.....	.....	.....	.....
94	48	180	.....	5	.....	....	.....	1,326	.....	.....	.....	.....
95	79	150	.....	35	.....	....	156	2,050	.....	.....	.....	.....
96	69	.....	.....	.....	217	....	.....	3,932	.....	.....	.....	.....
97	70	.....	.....	61	.....	....	30	1,544	.....	.....	.....	.....
98	80	.....	.....	.....	94	....	70	1,779	.....	.....	.....	.....
99	76	.....	.....	30	.....	....	.....	1,261	.....	.....	.....	.....
100	57	.....	.....	8	.....	....	25	1,028	.....	.....	.....	.....
101	76	100	.....	7	.....	....	120	1,559	.....	.....	.....	.....
102	51	.....	.....	6	.....	....	16	809	.....	.....	.....	.....
103	50	.....	.....	.....	.....	....	.....	740	.....	.....	.....	.....
104	53	.....	.....	30	.....	....	35	1,385	.....	.....	.....	.....
105	73	45	.....	15	.....	....	8	1,670	.....	.....	.....	.....
106	86	200	8,000	185	.....	....	.....	9,955	.....	.....	.....	.....
107	67	.....	.....	.....	.....	3	30	1,811	.....	.....	.....	.....
108	59	75	850	73	.....	5	.....	2,798	.....	.....	.....	.....
109	56	50	.....	25	.....	....	157	1,352	.....	.....	.....	.....
110	76	.....	200	107	.....	....	100	1,719	.....	.....	.....	.....
111	43	.....	.....	10	.....	....	.....	1,080	.....	.....	.....	.....
112	75	.....	.....	74	41	....	39	1,779	.....	.....	.....	.....
1	7,099	9,109	27,498	4,294	898	617	6,758	206,006	614	270	212	2,991
2	4,703	26,554	226,783	17,741	9,469	380	11,791	456,269	11,622	2,922	2,513	5,445
3	11,802	35,663	254,281	22,035	10,367	997	18,549	662,275	12,236	3,192	2,725	8,436
4	14,482	36,805	251,280	21,786	11,604	1102	16,680	668,130	14,907	14,010	2,665	6,760
5	.....	.....	3,001	249	.....	....	1,869	.....	.....	.....	60	1,676
6	2,680	1,142	.....	.....	1,237	105	.....	5,855	2,671	10,818	.....	.....
7	1.78	5.38	38.39	3.32	1.56	.15	2.80	.....	23.13	6.03	5.15	15.94

COLLEGIATE INSTITUTES AND
III TABLE M—MISCELLANEOUS

High Schools	Value of Household Science Department Equipment			Value of Agricultural Department Equipment	Value of Art Equipment (Middle School)	Total value of Special Equipment as per preceding nine columns
	Cookery, Sanitation and Hygiene	Handwork and Machine Sewing	Laundry Work			
	$	$	$	$	$	$
65 Niagara Falls South	501	120	3	177	.....	801
66 Norwood	.....	.....	.....	.....	.....	.....
67 Oakville	.....	.....	.....	154	.....	154
68 Omemee	.....	.....	.....	.....	.....	.....
69 Orangeville	.....	.....	.....	.....	75	75
70 Oshawa	.....	.....	.....	.....	.....	.....
71 Paris	.....	.....	.....	.....	.....	.....
72 Parkhill	.....	.....	.....	.....	.....	.....
73 Parry Sound	.....	.....	.....	.....	.....	.....
74 Pembroke	.....	.....	.....	.....	.....	.....
75 Penetanguishene	.....	.....	.....	.....	.....	.....
76 Petrolea	.....	.....	.....	1,037	.....	1,037
77 Plantagenet	.....	.....	.....	.....	.....	.....
78 Port Dover	.....	.....	.....	.....	.....	.....
79 Port Elgin	.....	.....	.....	.....	.....	.....
80 Port Hope	.....	.....	.....	.....	.....	.....
81 Port Perry	.....	.....	.....	.....	.....	.....
82 Port Rowan	.....	.....	.....	.....	.....	.....
83 Prescott	.....	.....	.....	.....	.....	.....
84 Richmond Hill	.....	.....	.....	.....	.....	.....
85 Rockland	.....	.....	.....	.....	.....	.....
86 Sault Ste. Marie	884	80	.....	600	.....	5,463
87 Shelburne	.....	.....	.....	.....	.....	.....
88 Simcoe	.....	.....	.....	200	.....	200
89 Smithville	.....	.....	.....	.....	.....	.....
90 Stirling	.....	.....	.....	.....	.....	.....
91 Streetsville	.....	.....	.....	.....	7	7
92 Sudbury	.....	.....	.....	.....	.....	.....
93 Sydenham	.....	.....	.....	.....	.....	.....
94 Thorold	.....	.....	.....	.....	.....	.....
95 Tillsonburg	.....	.....	.....	.....	.....	.....
96 Toronto, Commerce and Finance	.....	.....	.....	.....	.....	.....
97 Toronto, North	.....	.....	.....	.....	.....	.....
98 Trenton	.....	.....	.....	.....	.....	.....
99 Uxbridge	.....	.....	.....	.....	.....	.....
100 Vienna	.....	.....	.....	.....	.....	.....
101 Walkerton	.....	.....	.....	1,400	.....	1,400
102 Wardsville	.....	.....	.....	.....	.....	.....
103 Waterdown	.....	.....	.....	.....	.....	.....
104 Waterford	.....	.....	.....	.....	.....	.....
105 Watford	.....	.....	.....	.....	.....	.....
106 Welland	.....	.....	.....	.....	25	25
107 Weston	.....	.....	.....	.....	.....	.....
108 Whitby	.....	.....	.....	.....	.....	.....
109 Wiarton	.....	.....	.....	.....	.....	.....
110 Williamstown	.....	.....	.....	.....	.....	.....
111 Winchester	.....	.....	.....	.....	.....	.....
112 Wingham	.....	.....	.....	.....	.....	.....
1 Totals, High Schools	2,242	278	53	6,911	107	13,678
2 Totals, Collegiate Institutes	12,548	1,156	146	1,985	885	39,222
3 Grand Totals, 1915	14,790	1,434	199	8,896	992	52,900
4 Grand Totals, 1914	16,213	2,806	202	9,452	772	67,787
5 Increases	.....	.....	.....	.....	220	.....
6 Decreases	1,423	1,372	3	556	.....	14,887
7 Percentages	27.96	2.71	.37	16.81	1.87	.....

HIGH SCHOOLS—Concluded
INFORMATION—Concluded

	Religious and other Exercises						Destination of Pupils							
	Schools using authorized Scripture Readings	Schools using the Bible	Schools in which Passages are Memorized	Schools opened with Prayer	Schools closed with Prayer	Commencement Exercises	Commerce	Agriculture	Law, Medicine or the Church	Teaching	The Trades	Other occupations	Other High Schools or Collegiates	Without occupation enlisted
65	.....	.....	.....	1	.....	.....	10	5	.....	1	2	4	4	6
66	1	.....	.....	1	.....	1	4	2	1	8	1	2	3	1
67	.....	.....	.....	1	.....	1	5	6	2	3	1	4	4	.....
68	.....	.....	.....	1	.....	1	.....	1	.....	4	....	3	4	5
69	.....	.....	.....	1	.....	1	6	3	2	3	4	10	5	3
70	.....	.....	.....	1	.....	1	18	10	1	5	10	4	4	2
71	1	.....	.....	1	1	1	6	3	.....	.....	7	6	2	9
72	1	1	.....	1	.....	1	1	.....	.....	4	3	7	6	4
73	1	.....	.....	1	.....	1	8	1	2	10	3	20	3	.....
74	.....	.....	.....	1	.....	1	6	5	.....	10	4	10	5	5
75	.....	.....	.....	1	.....	.....	3	1	.....	5	....	13	2	6
76	1	1	1	1	.....	.....	8	3	2	.....	5	6	2	14
77	1	1	.....	1	1	.....	1	1	.....	7	2	.....	12	6
78	1	1	.....	1	.....	.....	1	3	.....	.....	2	2	2	5
79	.....	1	.....	1	.....	1	3	3	1	7	....	22	.....	.....
80	.....	.....	.....	1	.....	1	18	13	3	8	9	9	3	7
81	.....	.....	.....	1	.....	1	7	13	.....	3	....	2	7	2
82	.....	.....	.....	1	.....	.....	1	1	.....	3	....	4	.....	3
83	.....	.....	.....	1	.....	1	11	1	2	3	1	8	4	9
84	.....	1	.....	1	.....	.....	.....	4	.....	5	1	5	6	4
85	.....	.....	.....	1	.....	.....	1	.....	2	2	1	2	3	.....
86	.....	.....	.....	1	.....	1	23	3	2	11	2	14	4	16
87	.....	1	.....	1	.....	.....	2	3	.....	5	....	2	1	.....
88	1	1	.....	1	.....	1	10	12	2	9	7	9	12	4
89	.....	.....	.....	1	1	.....	1	5	1	4	....	4	7	7
90	1	1	.....	1	.....	.....	1	8	.....	11	....	3	10	.....
91	1	1	.....	1	.....	1	4	7	1	1	....	1	3	.....
92	.....	.....	.....	1	.....	1	6	.....	5	2	7	2	4	6
93	.....	1	.....	1	.....	1	3	14	2	22	1	1	1	1
94	.....	1	.....	1	.....	1	7	6	.....	1	5	2	4	2
95	.....	1	.....	1	.....	.....	4	1	1	9	....	4	2	20
96	.....	.....	.....	1	.....	1	128	.....	.....	.....	3	10	6	10
97	1	1	.....	1	.....	.....	13	7	2	3	1	5	4	10
98	1	.....	.....	1	.....	1	8	5	.....	6	3	8	12	10
99	.....	1	.....	1	.....	1	2	11	1	9	....	10	.....	3
100	.....	1	.....	1	1	.....	.....	3	.....	.....	2	1	3	3
101	1	.....	.....	.....	.....	1	1	2	.....	7	5	11	2	2
102	.....	.....	.....	1	.....	1	2	2	.....	5	....	1	2	2
103	.....	.....	.....	1	.....	1	.....	2	2	3	2	7	4	.....
104	.....	1	.....	1	.....	1	.....	4	.....	4	1	10	1	2
105	.....	1	.....	1	.....	1	3	19	1	7	1	7	1	.....
106	1	1	.....	1	.....	1	17	11	3	7	9	3	4	9
107	.....	1	.....	1	.....	1	1	8	.....	8	1	16	2	3
108	.....	.....	.....	1	.....	1	4	4	2	5	8	4	6	2
109	1	1	.....	1	.....	1	2	2	.....	.....	1	5	.....	2
110	.....	.....	.....	1	.....	1	1	.....	1	6	....	12	2	4
111	1	1	.....	1	.....	.....	5	3	1	7	....	13	2	.....
112	.....	1	.....	1	.....	1	5	6	5	19	1	10	10	2
1	39	54	1	111	5	69	655	616	136	686	260	747	447	424
2	23	25	.....	47	2	40	1,224	365	333	763	405	1,117	453	693
3	62	79	1	158	7	109	1,879	981	469	1,449	665	1,864	900	1,119
4	68	77	1	160	14	113	1,766	819	371	1,318	426	1,348	766	1,494
5	.....	2	.....	.....	.....	.....	113	162	98	131	239	516	134	.....
6	6	.....	.....	2	7	.....	.....	.....	.....	.....	....	.....	.....	375
7	38.75	49.37	.62	98.75	4.37	68.12	20.14	10.52	5.03	15.53	7.13	19.98	9.65	11.99

TABLE N—PROTESTANT SEPARATE SCHOOLS

——	No. 1 Grattan	No. 2 Hagarty	No. 1 Tilbury, North	L'Original Village	Penetanguishene Town	Totals
Number of Schools	1	1	1	1	1	5
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Receipts:						
Balances from 1914	539 91	312 66	29 94	61 30	363 24	1,307 05
Government grants	57 41	163 82	28 84	6 00	302 00	558 07
Municipal grants	13 66	12 25	8 84	.....	.....	34 75
Municipal assessments	765 61	400 00	516 00	561 75	6,113 00	8,356 36
Other sources	3 00	200 00	50 99	2 07	.....	256 06
Totals	1,379 59	1,088 73	634 61	631 12	6,778 24	10,512 29
Expenditure:						
Teachers' salaries	518 00	500 00	483 75	508 13	4,040 00	6,049 88
School sites and buildings	150 00	169 39	1 75	.....	278 20	599 34
Libraries, maps, apparatus, etc.	14 00	16 45	.....	4 50	69 50	104 45
Other expenses	54 12	229 00	141 23	98 63	2,259 93	2,782 91
Totals	736 12	914 84	626 73	611 26	6,647 63	9,536 58
Balances on hand	643 47	173 89	7 88	19 86	130 61	975 71
Teachers:						
Male	.....	.....	.....	.....	1	1
Female	1	1	1	1	6	10
Certificates	III	III	III	II	1 I; 6 II	1 I; 7 II; 3 III
Salaries	$500	500	500	500	Male, $1,000 Female, $558	1 male, $1000 Av. Female, $535
Pupils:						
Total number attending	31	50	18	19	305	423
Boys	13	21	7	13	166	220
Girls	18	29	11	6	139	203
Average attendance	17	30	13	13	217	290
No. in Primer	7	11	1	4	58	81
" 1st Book	4	10	4	3	31	52
" 2nd "	7	13	7	4	81	112
" 3rd "	8	12	2	4	75	101
" 4th "	5	4	4	4	60	77
" in Art	31	50	18	12	305	416
" Geography	24	39	13	12	247	335
" Music	.....	.....	.....	19	305	324
" Literature	31	50	16	12	305	414
" Composition	31	50	16	19	305	421
" Grammar	5	4	6	8	60	83
" English History	20	29	6	8	141	204
" Canadian History	20	29	6	4	141	200
" Physiology & Hygiene	31	50	18	15	305	419
" Nature Study	31	50	18	19	305	423
" Physical Culture	31	50	18	19	305	423
Brick or frame school house	Frame.	Frame.	Brick.	Brick.	Brick.	3 Bk; 2Fr.
Number of maps	8	7	10	12	20	57
Number of globes	1	1	1	1	1	5

TABLE O—REPORT ON KINDERGARTENS

Municipality	Number of Kindergartens	Number of Teachers	Head Directors	Assistants	Average Salary, Head Directors	Average Salary, Assistants	Number of Pupils in attendance	Average daily attendance	Charges per year for tuition
Cities:					$	$			$ c.
Kitchener (Berlin)..	4	5	4	1	700	550	313	231	.....
Brantford	7	10	7	3	504	450	341	244	1 00
Chatham	3	6	3	3	567	325	212	120	.....
Fort William	7	13	7	6	714	360	453	330	.....
Galt	4	4	4	.....	656	.....	139	125	.....
Guelph	5	5	5	.....	650	.....	331	169	.....
Hamilton	10	19	19	.....	618	.....	1,345	999	1 00
Kingston	4	4	4	.....	587	.....	243	135	50
London.....	16	28	16	12	809	537	947	520	.....
Ottawa.....	19	36	19	17	775	549	1,275	751	.....
Peterborough	5	6	5	1	650	400	433	176	1 00
Port Arthur	4	4	4	.....	775	.....	215	157	.....
St. Catharines	4	4	4	.....	568	.....	191	116	.....
St. Thomas.....	5	12	5	7	690	621	215	160	.....
Sault Ste. Marie ..	2	4	2	2	675	275	139	86	.....
Stratford	5	6	5	1	490	450	413	183	.....
Toronto	84	196	84	112	696	499	9,645	5,012	.....
Towns:									
Aylmer.....	1	2	1	1	490	250	110	47	1 00
Barrie	1	1	1	.....	700	.....	53	30	.....
Campbellford	1	1	1	.....	500	.....	49	35	.....
Cobourg	1	2	1	1	600	300	79	47	.....
Collingwood	2	2	2	.....	550	.....	84	68	.....
Goderich.....	1	1	1	.....	525	.....	83	32	.....
Hespeler	1	1	1	.....	525	.....	48	37	.....
Ingersoll	2	2	2	.....	525	.....	124	51	1 00
North Bay.....	1	2	1	1	625	575	66	36	.....
Owen Sound	4	5	4	1	487	250	265	164	.....
Pembroke	1	2	1	1	650	550	92	61	.....
Picton.....	1	1	1	.....	625	.....	55	33	.....
Preston	1	1	1	.....	675	.....	69	63	.....
Seaforth	1	1	1	.....	500	.....	30	25	1 00
Simcoe	1	1	1	.....	425	.....	66	53	.....
Tillsonburg.....	1	1	1	.....	475	.....	50	30	.....
Walkerville.....	2	2	2	.....	625	.....	170	77	.....
Waterloo	2	2	2	.....	650	.....	84	69	.....
Welland	4	2	2	.....	625	.....	194	96	.....
Wingham.....	1	1	1	.....	475	.....	56	37	.....
Rural:									
No. 3 Brantford—Grand View	1	1	1	.....	500	.....	53	43	1 00
Totals, 1915	228	396	226	170	669	490	18,730	10,628	.....
Totals, 1914.....	218	396	216	180	657	475	25,554	9,519	.....
Increases	12	.....	10	.....	12	15	*	1,118	.....
Decreases.....	.....	.....	.....	10	.....	.....	.....	.....	.....

*This column shows an *apparent* decrease from the previous year owing to the pupils who were promoted before the close of the year to the Primary Form being counted only in such Primary Form. Formerly they were counted in the Kindergarten as well as the Primary Form. As the percentage of average to total attendance was fifty-six, the increase in the average attendance, 1,118, indicates an increase in the total attendance of about 2,000.

TABLE P—REPORT ON NIGHT SCHOOLS

I. Night Public and Separate Schools

Municipality	Number of Schools	Teachers	Pupils Enrolled	Average Daily Attendance
Kitchener (Berlin)	1	2	34	24
Fort William	2	11	320	100
Hamilton	2	7	136	72
Port Arthur	1	1	102	28
St. Catharines	1	1	39	5
Toronto	22	40	1,126	435
Oshawa R.C. Sep. Sch.	1	1	37	11
Totals	30	63	1,794	675

II. Night High Schools

Municipality	Number of Schools	Teachers	Pupils Enrolled	Average Daily Attendance
Brantford	1	3	224	32
Collingwood	1	2	22	5
Cornwall	1	1	22	9
Hamilton	1	6	105	16
London	2	13	143	47
St. Thomas	1	1	21	8
Sault Ste. Marie	2	3	30	25
Stratford	1	2	78	21
Toronto	3	59	1,709	414
Totals	13	90	2,354	577

TABLE Q—REPORT ON TRUANCY

Cities	No. of children otherwise employed during school hours	No. of cases of truancy reported to the Truant Officers	No. of notices by Truant Officers to parents or guardians	No. of complaints made before Police Magistrates or J. P's	No. of convictions	No. of children reported by Teachers as not attending school
Belleville	.....	.....	6	.....	.....	158
Kitchener (Berlin)	5	100	53	2	1	1
Brantford	10	4	12	7	.....	.....
Chatham	1	46	168	4	.....	4
Fort William	2	21	66	.....	.....	45
Galt	.....	.....	.....	1	1	.....
Guelph	8	85	39	11	3	1
Hamilton	.....	265	1,093	18	6	1,348
Kingston	3	3	153	3	1	5
London	12	15	75	11	11	90
Niagara Falls	6	18	53	1	1	98
Ottawa	6	333	70	1	1	4,313
Peterborough	.....	46	32	1	.....	2
Port Arthur	2	.....	7	2	2	682
St. Catharines	.....	28	28	4	4	.....
St. Thomas	2	103	57	1	1	.....
Sarnia	5	3	5	.....	.....	13
Sault Ste. Marie	7	222	222	4	.....	5
Stratford	1	.....	55	.....	.....	55
Toronto	.....	7,877	128	117	3	76
Windsor	6	6	17	3	3	774
Woodstock	10	2	35	5	1	115

TABLE Q—REPORT ON TRUANCY—Continued

Towns	No. of children otherwise employed during school hours	No. of cases of truancy reported to the Truant Officers	No. of notices by Truant Officers to parents or guardians	No. of complaints made before Police Magistrates or J. P's	No. of convictions	No. of children reported by Teachers as not attending school
Towns						
Almonte		14	14			
Arnprior			12			
Aylmer		20	20	1	1	
Barrie		105	61	10	4	100
Blenheim	2		2			3
Blind River						11
Bowmanville	2		25			40
Bracebridge		4	1			
Brampton			21	3		
Bridgeburg		8				8
Brockville		20	20			
Burlington	2	29	9			4
Campbellford		6	10	1	1	
Carleton Place		5	5			25
Chesley		5	5			
Cobalt	6	3				
Cochrane		5	5	1		5
Collingwood		11	11	2	2	
Copper Cliff			15	3	1	45
Cornwall		18	18	1		
Deseronto			15			5
Dresden		10	8			
Dundas	5	5	1	5	5	
Dunnville		40	40	5		
Durham		1				1
Eastview	2	22	58			58
Essex		2	5	1		2
Forest		6	2			6
Fort Frances	1	1	4			
Gananoque		25	20			2
Goderich			5			5
Hanover			15			15
Harriston		8	8			8
Hespeler		9	18			4
Ingersoll	3	7	7			1
Keewatin			1			1
Kenora		104	8			
Leamington		11	3			
Lindsay		15	12			
Listowel			12			
Meaford			3			
Milton	1					1
Mitchell		1				
Mount Forest		1	1			1
Napanee		8	8			
Newmarket						10
Niagara			2			
North Bay	3	26	35			140
Oakville		3	3			3
Orillia	3	268	268	6	6	
Oshawa			15			30
Owen Sound	3	30	353			
Paris	1	5	5	1	1	
Parkhill		4	4	1	1	
Parry Sound		55	55	3		
Pembroke		10	10			
Perth		2	1			
Port Hope		14	14			14
Prescott		7	7			1
Preston		14	2			

TABLE Q—REPORT ON TRUANCY—Continued

Towns.—Continued	No. of children otherwise employed during school hours	No. of cases of truancy reported to the Truant Officers	No. of notices by Truant Officers to parents or guardians	No. of complaints made before Police Magistrates or J. P's	No. of convictions	No. of children reported by Teachers as not attending school
Rainy River		5	5			
Renfrew			12			22
Ridgetown			1			2
St. Mary's		20				4
Sandwich	1	4	25	3	3	
Simcoe	2		153	2	2	
Southampton		17	10			
Stayner		4	4			
Strathroy		6	2	1	1	2
Sturgeon Falls			6			20
Sudbury	12	20	150			20
Thessalon		3	3			
Thornbury		2	2			
Thorold		12	10			14
Tillsonburg			9			
Trenton	7	86	86			13
Trout Creek		1	1	1	1	
Uxbridge		23	17			
Vankleek Hill		21	27			
Walkerville		4				
Wallaceburg	2	4	3			
Waterloo		8	20			2
Webbwood		3	3			
Welland	1	368	105	2	2	1
Whitby	2	38	27			
Wiarton	6	40	31			46
Villages						
Acton		3	3			9
Ailsa Craig		4	4			
Ayr			14			14
Bayfield	3		4			
Beamsville		13	13	2	2	
Bloomfield	5	5	5	1	1	2
Bobcaygeon		2	1			4
Bolton		15	15			
Bradford		1				1
Burk's Falls		15	15			
Caledonia		9	14			5
Cayuga		2	2			
Chesterville						1
Colborne	2	4	6			4
Coldwater	1	6	8	1		
Courtright						1
Delhi		4				
Drayton		1	1			
Elora			4			
Elmira		1	1			1
Embro		4	2			
Exeter	1	1	1			2
Fergus		2	1			2
Finch		2	2			
Fort Erie			4			4
Georgetown	2	30	30	1	1	
Glencoe		2	12			12
Grimsby		2	2			2
Hagersville	1	2	2			1
Havelock		2	2	2		4
Holland Landing		6	6			6
Humberstone		3	3			
Jarvis		1	1			

TABLE Q—REPORT ON TRUANCY—Concluded

Villages.—Concluded	No. of children otherwise employed during school hours	No. of cases of truancy reported to the Truant Officers	No of notices by Truant Officers to parents or guardians	No. of complaints made before Police Magistrates or J.P's	No. of convictions	No. of children reported by Teachers as not attending school
Lakefield		2	2			
Lucan		4	4			
Markdale		4	1			2
Markham			25			25
Maxville		8	8			
Merritton	1	2	2			2
Millbrook			12			12
Milverton		8	8			
Mimico		4	77			
Morrisburg		1	2			2
Newburgh	1					1
Newcastle		3				
New Hamburg		9	9			9
New Toronto		2	2			
Norwich	1	4	2	1	1	1
Norwood		1				1
Omemee						5
Port Colborne		25	25			
Port Carling			2			
Port Dover			28			28
Port Elgin	1	2	2			2
Port Rowan		1	1			1
Port Stanley						2
Shallow Lake			30			25
Shelburne		1	2			1
Stirling						2
Sutton		10	8			2
Tavistock		2	2			
Thamesville	3	11	11			
Victoria Harbour		5	5			5
Wardsville			3			6
Waterford		9	13	2		
Winchester		1				
Woodville			2			2
Townships						
Barrie, S.S. No. 4			3			3
Brantford	90	193	160			
Burford	22	80	7			
Coleman, S.Ss. 3a and 3b			2			50
Denbigh, S.S.No.5		9	12			8
Dumfries North.	1	2	22			1
Kennebec, S. S. No. 3		9	6			
Kennebec, S. S. No. 7			6			
Morrison	7	6	20	2		14
Oso, S.S. No. 9			22			10
Oxford West	15	21	13			1
Totals	310	11,414	5,107	261	75	8,778

NOTE—Out of 303 urban municipalities in the Province, 60 reported no truants, while 68 did not report at all; the remaining 175 are reported above.

TABLE R—GENERAL

A General Statistical Abstract, exhibiting the comparative state and progress of Schools (including collegiate institutes), from the year 1867

No.	Subjects compared	1867	1872	1877	1882
1	Population	.....	1,620,851	.....	1,926,922
2	School population between the ages of five and sixteen years up to 1882, five to twenty-one subsequently	447,726	495,756	494,804	483,817
3	High Schools (including Collegiate Institutes).	102	104	104	104
4	Continuation Schools	.....	.....	.....	.....
5	Public Schools in operation	4,261	4,490	4,955	5,013
6	Roman Catholic Separate Schools	161	171	185	190
7	Grand total of above schools in operation	4,524	4,765	5,244	5,307
8	Pupils attending High Schools (including Collegiate Institutes and Night High Schools).	5,696	7,968	9,229	12,348
9	Pupils attending Continuation Schools	.....	.....	.....	.....
10	Pupils attending Public Schools (including Kindergarten and Night Public Schools)	382,719	433,256	465,908	445,364
11	Pupils attending Roman Catholic Separate Schools	18,924	21,406	24,952	26,148
12	Grand total of students and pupils attending High, Continuation, Public, and Separate Schools	407,339	462,630	500,089	483,860
13	Amount paid for the salaries of Public and Separate School teachers	$1,093,517	1,371,594	2,038,099	2,144,449
14	Amount paid for the erection and repairs of Public and Separate School houses, and for libraries, apparatus, books, fuel, stationery, etc.	$379,672	835,770	1,035,390	882,526
15	Total amount paid for Public and Separate School purposes	$1,473,189	2,207,364	3,073,489	3,026,975
16	Amount paid for Continuation School teachers' salaries	.....	.....	.....	.....
17	Total amount paid for Continuation School purposes	.....	.....	.....	.....
18	Amount paid for High School (and Collegiate Institute) teachers' salaries	$94,820	141,812	211,607	253,864
19	Amount paid for erection and repair of High School (and Collegiate Institute) houses, maps, apparatus, prizes, fuel, books, etc.	$29,361	68,193	132,103	89,856
20	Total amount paid for High School and Collegiate Institute purposes	$124,181	210,005	343,710	343,720
21	Grand total paid for educational purposes as above	$1,597,370	2,417,369	3,417,199	3,370,695
22	Total Public and Separate School Teachers	4,890	5,476	6,468	6,857
23	Male Teachers in Public and Separate Schools	2,849	2,626	3,020	3,062
24	Female Teachers in Public and Separate Schools	2,041	2,850	3,448	3,795
25	Continuation School Teachers	.....	.....	.....	.....
26	High School and Collegiate Institute Teachers.	159	239	280	332
27	Number of all teachers, as specified above	5,049	5,715	6,748	7,189

* Included in Public and Separate School attendances. † Included with

STATISTICAL ABSTRACT

Education in Ontario, as connected with Public, Separate, Continuation and High to 1915, compiled from Returns to the Department of Education

No.	1887	1892	1897	1902	1907	1912	1914	1915
1	.....	2,114,321	.....	2,167,938	.....	‡2,523,358	.....	.....
2	611,212	595,238	590,055	584,512	590,285	609,127	636,616	643,975
3	112	128	130	134	143	148	161	160
4	.....	.....	44	65	107	138	131	132
5	5,277	5,577	5,574	5,671	5,819	5,939	6,031	6,063
6	229	312	340	391	449	513	519	537
7	5,618	6,017	6,088	6,261	6,518	6,738	6,842	6,892
8	17,459	22,837	24,390	24,472	30,331	32,608	38,840	40,780
9	.....	.....	*1,618	*2,190	*4,744	6,094	6,069	6,800
10	462,839	458,553	453,256	420,094	413,510	429,030	455,276	458,117
11	30,373	37,466	41,620	45,964	51,502	61,297	66,271	67,481
12	510,671	518,856	519,266	490,530	495,343	529,029	566,456	573,178
13	2,458,540	2,752,629	2,886,061	3,198,132	4,389,524	6,109,547	7,203,034	7,614,110
14	1,283,564	1,301,289	1,329,609	1,627,028	3,166,655	5,164,413	7,647,934	6,653,366
15	3,742,104	4,053,918	4,215,670	4,825,160	7,556,179	11,273,960	14,850,968	14,267,476
16	.....	.....	Included with No. 13	Included with No. 13	Included with No. 13	202,875	208,386	219,660
17	.....	.....	Included with No. 15	Included with No. 15	Included with No. 15	265,087	294,125	310,794
18	327,452	472,029	532,837	547,402	783,782	1,232,537	1,476,756	1,472,673
19	168,160	224,085	183,139	222,278	429,915	720,524	1,968,184	998,301
20	495,612	696,114	715,976	769,680	1,213,697	1,953,061	3,444,940	2,470,974
21	4,237,716	4,750,032	4,931,646	5,594,840	8,769,876	13,492,108	18,590,033	17,049,244
22	7,594	8,480	9,128	9,631	10,200	11,128	11,942	12,246
23	2,718	2,770	2,784	2,311	1,813	1,511	1,628	2,081
24	4,876	5,710	6,344	7,320	8,387	9,617	10,314	10,165
25	.....	.....	†44	†86	†140	226	237	238
26	398	522	579	593	750	917	1,023	1,020
27	7,992	9,002	9,707	10,224	10,950	12,271	13,202	13,504

Public and Separate School teachers. ‡Census of 1911.

APPEN=

TEACHERS'

FINANCIAL

Name of Institute	Total Registered Attendance of Members	Receipts		
		Government Grant	Municipal Grant	Members' Fees
		$ c.	$ c.	$ c.
1 Algoma, East	121	50 00	.....	29 25
2 Algoma (Eastern Division)	36	50 00	.....	17 00
3 Brant	156	.....	.....	.....
4 Bruce, East	112	50 00	50 00	.....
5 Bruce, West	112	50 00	50 00	10 00
6 Carleton, East	129	50 00	50 00	60 50
7 Carleton, West, and Lanark, East	118	.....	50 00	59 00
8 Dufferin	120	50 00	100 00	.....
9 Dundas	101	.....	.....	50 50
10 Elgin, East	109	.....	.....	.....
11 Elgin, West	109	.....	.....	.....
12 Essex, North	60	25 00	50 00	.....
13 Essex, South	143	50 00	50 00	32 50
14 Frontenac, North, and Addington	55	25 00	5 62	14 25
15 Frontenac, South	94	50 00	50 00	26 50
16 Glengarry	104	.....	.....	19 25
17 Grey, East	82	50 00	50 00	.....
18 Grey, South	99	50 00	50 00	23 25
19 Grey, West	118	50 00	50 00	28 75
20 Haliburton	35	.....	.....	.....
21 Haldimand	88	50 00	50 00	.....
22 Halton	106	50 00	50 00	26 75
23 Hastings, Centre	92	.....	50 00	.....
24 Hastings, North	54	25 00	24 75	.....
25 Hastings, South, and Belleville	132	.....	67 50	.....
26 Huron, East	125	50 00	50 00	57 50
27 Huron, West	116	.....	50 00	.....
28 Kenora	50	50 00	.....	.....
29 Kent, East	104	50 00	50 00	25 00
30 Kent, West, and City of Chatham	131	.....	50 00	32 75
31 Lambton, East	120	.....	50 00	.....
32 Lambton, West	143	50 00	65 70	27 50
33 Lanark, West, and Smith's Falls	120	50 00	50 00	25 20
34 Leeds, East, and Brockville (No. 2)	106	.....	50 00	37 10
35 Leeds, West (No. 1)	78	.....	.....	17 75
36 Leeds and Grenville No. 3	93	.....	25 00	.....
37 Lennox and Addington	116	.....	.....	20 00
38 Lincoln	96	50 00	50 00	.....
39 Manitoulin, East	23	50 00	.....	.....
40 Manitoulin, West	29	50 00	.....	.....
41 Middlesex, East	116	.....	50 00	30 50
42 Middlesex, West	106	50 00	50 00	81 65
43 Muskoka	112	50 00	.....	.....
44 Nipissing, North	74	50 00	.....	18 55
45 Norfolk	108	50 00	50 00	.....
46 Northumberland and Durham No. 1	73	50 00	25 00	.....
47 Northumberland and Durham No. 2	80	25 00	25 00	.....
48 Northumberland and Durham No. 3	95	50 00	25 00	.....
49 Ontario, North	79	.....	25 00	19 75

DIX H

INSTITUTES

STATEMENT

	Receipts—Continued		Expenditure				
	Balances and other sources	Total Receipts	Printing, Postage, etc.	Libraries, Educational Journals, etc.	Miscellaneous	Total Expenditure	Balances
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	188 29	267 54	14 60	41 00	51 60	107 20	160 34
2	9 54	76 54	5 35	.....	14 65	20 00	56 54
3	257 40	257 40	19 81	19 80	126 23	165 84	91 56
4	165 68	265 68	74 95	22 40	72 34	169 69	95 99
5	272 45	382 45	17 50	.....	115 45	132 95	249 50
6	102 52	263 02	10 09	.....	98 15	108 24	154 78
7	255 43	364 43	84 24	48 98	143 25	276 47	87 96
8	67 29	217 29	34 81	29 00	67 71	131 52	85 77
9	334 44	384 94	24 50	.....	210 25	234 75	150 19
10	412 00	412 00	11 50	.....	45 05	56 55	355 45
11	54 85	54 85	3 25	.....	24 86	28 11	26 74
12	178 30	253 30	7 30	27 00	59 03	93 33	159 97
13	59 12	191 62	93 35	.....	47 25	140 60	51 02
14	18 67	63 54	4 31	2 50	30 00	36 81	26 73
15	78 17	204 67	8 10	5 50	97 70	111 30	93 37
16	197 10	216 35	9 49	.....	62 00	71 49	144 86
17	211 29	311 29	8 50	31 85	75 75	116 10	195 19
18	321 81	445 06	10 34	108 50	58 60	177 44	267 62
19	219 70	348 45	7 85	85 25	197 55	290 65	57 80
20	172 12	172 12	5 75	5 00	50 15	60 90	111 22
21	396 22	496 22	10 05	.....	43 95	54 00	442 22
22	149 80	276 55	9 50	80 25	32 02	121 77	154 78
23	117 82	167 82	25 00	11 00	44 30	80 30	87 52
24	170 22	219 97	17 01	.....	20 65	37 66	182 31
25	88 70	156 20	17 00	44 50	85 40	146 90	9 30
26	227 63	385 13	10 00	3 50	148 10	161 60	223 53
27	272 04	322 04	38 90	10 50	272 64	322 04	.....
28	47 65	97 65	9 17	9 10	21 70	39 97	57 68
29	219 73	344 73	10 90	20 00	16 00	46 90	297 83
30	289 57	372 32	7 96	.....	105 89	113 85	258 47
31	106 29	156 29	9 50	.....	142 33	151 83	4 46
32	209 21	352 41	7 45	54 00	177 80	239 25	113 16
33	225 67	350 87	8 85	42 00	182 02	232 87	118 00
34	94 86	181 96	9 00	59 20	66 00	134 20	47 76
35	238 00	255 75	12 05	33 00	137 50	182 55	73 20
36	96 37	121 37	8 70	10 00	53 45	72 15	49 22
37	88 04	108 04	11 02	.....	57 55	68 57	39 47
38	94 19	194 19	14 47	2 72	85 22	102 41	91 78
39	11 30	61 30	3 50	18 90	28 55	50 95	10 35
40	11 88	61 88	52	.....	57 25	57 77	4 11
41	140 65	221 15	68 35	.....	32 25	100 60	120 55
42	78 63	260 28	28 45	.....	157 50	185 95	74 33
43	121 63	171 63	6 08	.....	52 05	58 13	113 50
44	60 22	128 77	.....	.....	19 00	19 00	109 77
45	95 36	195 36	10 19	40 00	63 35	113 54	81 82
46	74 55	149 55	12 03	.....	29 33	41 36	108 19
47	95 55	145 55	6 75	.....	48 10	54 85	90 70
48	133 11	208 11	10 63	.....	87 40	98 03	110 08
49	117 81	162 56	11 00	.....	117 25	128 25	34 31

TEACHERS'

FINANCIAL

Name of Institute—Concluded	Total Registered Attendance of Members	Receipts		
		Government Grant	Municipal Grant	Members' Fees
		$ c.	$ c.	$ c.
50 Ontario, South	105	.....	50 00	.....
51 Oxford	215	50 00	50 00	37 00
52 Parry Sound, East	65	50 00	.....	.....
53 Parry Sound, West	61	50 00	.....	.....
54 Peel	97	50 00	50 00	98 00
55 Perth and Stratford	205	25 00	75 00	.....
56 Peterborough	115	50 00	50 00	21 50
57 Prescott and Russell	115	50 00	50 00	.....
58 Prince Edward	99	50 00	50 00	.....
59 Rainy River	58	50 00	.....	14 50
60 Renfrew, North	120	50 00	50 00	.....
61 Renfrew, South	150	50 00	50 00	.....
62 Simcoe, East	126	.....	100 00	.....
63 Simcoe, North	109	50 00	50 00	.....
64 Simcoe, South-West	103	50 00	50 00	22 00
65 Stormont	129	.....	.....	11 25
66 Sudbury	65	.....	.....	.....
67 Thunder Bay	140	.....	.....	37 50
68 Timiskaming	120	50 00	.....	48 00
69 Victoria	146	50 00	50 00	49 83
70 Waterloo	249	100 00	100 00	63 25
71 Welland	139	.....	50 00	.....
72 Wellington, North	102	50 00	50 00	24 00
73 Wellington, South	98	50 00	50 00	.....
74 Wentworth	115	50 00	50 00	49 00
75 York, North	86	.....	50 00	25 50
76 York, South	213	.....	.....	85 25
77 Ontario Educational Association*	1,193	1,400 00	.....	596 50
Cities				
78 Brantford	83	.....	25 00	.....
79 Guelph	46	.....	25 00	.....
80 Hamilton	319	.....	.....	159 50
81 Kingston	68	.....	25 00	16 75
82 London	238	75 00	50 00	70 75
83 Ottawa	364	.....	75 00	95 00
84 Peterborough	94	.....	25 00	46 00
85 St. Catharines and Niagara Falls	77	25 00	25 00	.....
86 Toronto	1,443	350 00	350 00	699 00
87 Windsor and Walkerville	104	25 00	25 00	25 50
Totals, 1915	12,152	4,300 00	3,288 57	3,086 33
Totals, 1914	11,684	5,650 00	3,645 27	3,044 40
Increases	468	.....	.....	41 93
Decreases	.....	1,350 00	356 70	.....

* Statement for 1915-1916

INSTITUTES—Concluded

STATEMENT—Concluded

	Receipts—Continued		Expenditure				
	Balances and other sources	Total Receipts	Printing, Postage, etc.	Libraries, Educational Journals, etc.	Miscellaneous	Total Expenditure	Balances
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
50	210 46	260 46	8 45	9 44	71 95	89 84	170 62
51	193 03	330 03	9 15	18 00	110 20	137 35	192 68
52	78 52	128 52	5 00	.....	25 65	30 65	97 87
53	4 88	54 88	6 60	3 75	20 25	30 60	24 28
54	138 63	336 63	35 40	.....	165 36	200 76	135 87
55	322 71	422 71	12 02	.....	103 55	115 57	307 14
56	502 07	623 57	12 91	43 00	523 14	579 05	44 52
57	53 61	153 61	14 93	.....	25 70	40 63	112 98
58	135 46	235 46	9 40	20 87	43 49	73 76	161 70
59	66 10	130 60	5 50	.....	60 05	65 55	65 05
60	306 25	406 25	31 25	31 00	193 30	255 55	150 70
61	91 50	191 50	7 43	23 00	138 70	169 13	22 37
62	146 47	246 47	14 15	.....	68 48	82 63	163 84
63	117 62	217 62	17 60	.....	65 55	83 15	134 47
64	45 85	167 85	5 05	76 74	49 15	130 94	36 91
65	236 61	247 86	14 99	101 50	110 85	227 34	20 52
66	60 87	60 87	15 75	.....	19 15	34 90	25 97
67	132 47	169 97	11 60	.....	68 50	80 10	89 87
68	65 36	163 36	57	.....	100 65	101 22	62 14
69	288 09	437 92	15 96	79 93	188 82	284 71	153 21
70	216 53	479 78	16 53	6 50	240 05	263 08	216 70
71	248 35	298 35	10 92	12 00	118 18	141 10	157 25
72	183 56	307 56	10 50	83 38	47 50	141 38	166 18
73	112 20	212 20	14 64	.....	93 40	108 04	104 16
74	103 22	252 22	28 40	40 75	159 43	228 58	23 64
75	195 65	271 15	51 20	38 25	47 55	137 00	134 15
76	342 75	428 00	78 00	82 75	57 25	218 00	210 00
77	922 98	2,919 48	1,520 37	.....	971 67	2,492 04	427 44
78	82 93	107 93	.....	.....	37 86	37 86	70 07
79	38 65	63 65	8 52	.....	30 06	38 58	25 07
80	819 70	979 20	8 16	31 40	549 75	589 31	389 89
81	55 58	97 33	8 68	29 58	55 80	94 06	3 27
82	98 23	293 98	24 39	.....	130 00	154 39	139 59
83	2,811 28	2,981 28	58 24	45 00	2,175 10	2,278 34	702 94
84	205 16	276 16	6 90	139 15	69 25	215 30	60 86
85	47 45	97 45	5 49	9 83	24 56	39 88	57 57
86	6,471 06	7,870 06	113 99	472 84	3,838 65	4,425 48	3,444 58
87	91 78	167 28	5 75	.....	72 50	78 25	89 03
	23,892 49	34,567 39	3,074 01	2,264 11	14,903 17	20,241 29	14,326 10
	22,308 42	34,648 09	2,583 12	2,358 06	12,710 57	17,651 75	16,996 34
	1,584 07	.....	490 89	.....	2,192 60	2,589 54	.....
	.....	80 70	.....	93 95	.....	.....	2,670 24

APPEN-

FIFTH CLASSES,

Inspectorate		Name of School (In the case of rural schools the section number and the name of the township are given.)		Post Office
Algoma	1	1	McDonald	Echo Bay
Brant	2	8	Burford	Burford
Bruce, East	3	14	Carrick	Mildmay
Carleton, East	4	11	Fitzroy	Kinburn
Dundas	5	1	Mountain	South Mountain
	6	22	Mountain	Mountain Station
	7	4	Winchester	Ormond
Elgin, East	8	9	Southwold	Shedden
	9	1	Southwold	Fingal
Essex	10		Kingsville	Kingsville
Frontenac, South	11	6	Kingston	Cataraqui
Grey, East	12	12	Artemesia & Glenelg.	Priceville
	13	3	Euphrasia	Kimberley
Grey, South	14		Neustadt	Neustadt
Grey, West	15		Shallow Lake	Shallow Lake
Haliburton	16	1	Anson	Minden
Hastings, North and Parry Sound, S.-E.	17		South River	South River
	18		Sundridge	Sundridge
	19		Trout Creek	Trout Creek
Huron, East	20	11	Grey	Ethel
	21	7	Howick	Gorrie
	22	17	Howick	Fordwich
Huron, West	23		Hensall	Hensall
	24	7	Hay	Zurich
	25	5	Stephen	Crediton
	26	16	Stephen	Dashwood
	27	6	Usborne	Woodham
	28		Bayfield	Bayfield
	29	8	Ashfield	Dungannon
	30	14	Stanley	Kippen
Kent, East	31	3&4	Orford	Duart
	32	U4	Raleigh and Harwich.	Blenheim
Lambton, East (2)	33	1	Euphemia	Shetland
	34	5	Euphemia	Florence
	35	7	Dawn	Croton
	36	12	Dawn	Dresden

DIX I

1915-1916

Teachers			Pupils		Grade of Fifth Class				
Name of Principal and Degree	Professional Certificate	Annual Salary, 1916	No. of Pupils	Average Daily Attendance	A	B	C	Total Value of Approved Equipment	Legislative Grant
		$						$ c.	$ c.
1 H. R. Ponting	II	750	10	7	....	1	....	144 74	138 28
2 Caroline B. Good	I	920	17	11	1	....	....	478 00	157 12
3 John T. Kidd	II	1,025	10	9	....	1	....	247 34	78 07
4 Leah Bechler	II	700	9	7	1	....	....	262 15	88 05
5 E. H. Thorpe	II	900	26	21	1	....	....	233 16	115 98
6 Perley S. Boyd	II	700	9	6	1	....	....	500 60	102 92
7 Margt. P. Chester	II	715	7	5	1	....	....	273 86	91 94
8 Oliver M. Stonehouse	II	750	5	2	....	1	....	112 50	66 34
9 Libbie MacLennan	II	700	3	2	....	....	1	128 95	51 99
10 W. J. Elliott	I	1,300	19	13	1	....	....	341 45	173 25
11 Lilla J. Needham	II	700	4	2	1	....	....	82 90	72 47
12 Earl G. Miller	I	725	12	6	1	....	....	208 55	107 88
13 Kathleen McKee, B.A.	II	700	5	4	....	1	....	320 95	99 87
14 Thos. H. Patterson	II	700	8	7	....	1	....	124 59	93 48
15 Thos. M. Thomson	I	800	7	5	1	....	....	82 08	120 23
16 W. Macarthur	II	700	9	5	....	1	....	200 00	69 43
17 S. G. Gilleland	I	900	8	4	1	....	....	259 21	332 20
18 E. K. Godfrey	II	750	16	10	1	....	....	201 59	250 40
19 Robert Ingram	II	750	8	5	....	1	....	134 77	197 44
20 Edna McLelland	II	650	4	2	....	1	....	95 14	46 88
21 Robt. S. McBurney	I	700	4	3	....	1	....	182 04	68 03
22 Geo. H. Jefferson	II	775	7	6	....	1	....	155 23	70 05
23 Wm. Mackay	II	1,000	9	7	1	....	....	242 00	142 86
24 Geo. S. Howard	II	1,000	15	11	1	....	....	256 00	117 97
25 Jessie L. Linklater	I	1,050	17	15	1	....	....	371 00	149 73
26 Geo. W. Shore	II	1,000	20	15	1	....	....	375 00	128 32
27 Nellie Medd	II	675	11	7	1	....	....	80 00	66 77
28 Violet E. Stevens	I	700	11	9	....	1	....	249 00	126 06
29 Frederick Ross	II	825	9	6	....	1	....	220 00	75 69
30 Wm. H. Johnston	II	725	3	2	....	....	1	205 00	65 68
31 Annie M. Blue	II	675	6	5	....	1	....	191 91	60 73
32 Jas. R. Newkirk	II	750	2	2	....	....	1	105 60	57 04
33 Evelyn Long	II	600	6	5	....	....	1	110 00	31 32
34 Bert Currie	I	800	16	11	1	....	....	206 15	94 06
35 Mrs. P. Minshall	II	600	2	2	....	....	1	88 79	29 47
36 Ada McPherson	II	600	3	2	....	....	1	84 17	27 98

FIFTH CLASSES,

Inspectorate		Name of School (In the case of rural schools, the section number and the name of the township are given)	Post Office
Lambton, West	37	Courtright	Courtright
	38	Wyoming	Wyoming
	39 11	Moore	Brigden
Lincoln	40 2	Louth	Jordan Station
	41 U2	Clinton and 3 Louth.	Vineland
	42 11	Gainsborough	Wellandport
Manitoulin, etc.	43	Massey	Massey
Middlesex, East	44 2	Delaware	Delaware
Middlesex, West	45 15	Caradoc	Mt. Brydges
Northumberland & Durham, No. 3.	46 U16	Murray & 18 Brighton	Wooler
Ontario, N. and Parry Sound, N. E.	47 13	Brock	Sunderland
	48 U4	Brock	Manilla
	49 5	Scott	Zephyr
	50 U4	North Himsworth and Ferris	Callender
	51 1	Nipissing	Nipissing
Ontario, South	52 4	(West) Pickering	Pickering
	53 3	Whitby	Brooklin
Oxford, North	54 U8	and 4 Blandford and Blenheim	Bright
	55 10	Zorra, E.	Innerkip
	56 U5	E. Nissouri and North Oxford	Thamesford
Oxford, South	57 12	Dereham	Brownsville
Parry Sound, South	58 U1	Chapman and Croft	Magnetawan
	59 7	Humphrey	Rosseau
	60	Kearney	Kearney
	61 1	McKellar	McKellar
Peel	62	Bolton	Bolton
Perth, North	63	Milverton	Milverton
	64 U6	Logan	Monkton
Prescott and Russell	65 2	Cumberland	Vars
	66 3	Cumberland	Navan
	67 5	Cumberland	Cumberland
Rainy River & Thunder Bay, E.	68 1	Schreiber	Schreiber
	69 5	Lash	Emo
	70	Rainy River	Rainy River
Renfrew, North	71 6	Ross	Forester's Falls
	72 7	Westmeath	Beachburg

1915-1916—Continued

	Name of Principal and Degree	Teachers: Professional Certificate	Teachers: Annual Salary, 1915	Pupils: No. of Pupils	Pupils: Average Daily Attendance	Grade of Fifth Class: A	Grade of Fifth Class: B	Grade of Fifth Class: C	Total Value of Approved Equipment	Legislative Grant
			$						$ c.	$ c.
37	R. J. Leach	II	800	4	4	....	1	....	223 65	106 45
38	Ella Sutherland	II	700	5	4	....	1	....	126 00	93 61
39	Wm. E. Jarrott	II	975	25	21	1	....	....	296 32	121 48
40	Stanley Henderson	I	750	5	3	....	1	....	118 75	65 08
41	Geo. W. Clark	II	850	4	3	....	1	....	446 76	90 89
42	Mrs. Jennie Misener	II	800	4	3	....	....	1	186 19	64 04
43	Lillian Ord	I	900	13	9	....	....	1	484 37	275 82
44	Esther Heatly	II	650	10	8	....	1	....	204 46	59 11
45	Ella M. McDougall	II	600	4	3	....	1	....	227 36	49 67
46	Vern Ames	II	850	7	3	....	1	....	126 51	67 56
47	Edith Harvey	II	700	6	4	....	1	....	114 25	62 14
48	Belle Shannon	II	675	4	2	....	1	....	167 40	58 60
49	Julius Rynard	II	800	7	5	....	1	....	210 80	74 89
50	Jos. A. Mahon	II	700	10	8	1	....	....	229 90	214 00
51	Lewis E. Armstrong	I	750	5	4	....	1	....	156 44	183 82
52	Geo. E. Feirheller	II	800	10	8	1	....	....	246 48	108 44
53	Frances Phelan	II	700	4	2	....	....	1	87 57	48 37
54	G. O. McKenzie	II	700	5	4	....	1	....	202 09	69 77
55	Ethel Mossip	II	700	7	5	1	....	....	383 83	98 64
56	A. W. Waring	I	700	9	4	1	....	....	298 62	107 54
57	Wilfrid K. Cowan	I	875	17	11	1	....	....	342 22	146 65
58	H. W. Edwards	II	725	7	5	....	1	....	230 49	153 20
59	Lawrence Maguire	II	725	4	3	....	1	....	206 26	148 98
60	Mrs. Mary Dipsam	II	675	4	3	....	1	....	140 31	178 84
61	Nina I. MacLeod	II	700	13	8	1	....	....	251 05	174 16
62	Peter O. Nelson	II	900	33	27	1	....	....	294 65	*291 12
63	Wm. R. Burnett	II	900	16	9	1	....	....	373 70	151 44
64	Maggie Huggins	II	750	4	2	....	1	....	116 42	75 38
65	Mary E. O'Toole	I	700	11	9	1	....	....	167 24	85 23
66	Mabel Maxwell, B.A.	I	800	23	18	1	....	....	224 67	133 73
67	Anna V. Dorrance	I	800	17	11	1	....	....	183 28	133 39
68	Geo. A. Evans	II	1,300	17	13	1	....	....	116 26	211 62
69	Mary C. Ryan	II	800	10	7	1	....	....	155 49	255 42
70	Robt. L. Manning	I	1,200	16	8	1	....	....	511 81	351 80
71	Jennie Page, B.A.	I	800	10	7	....	1	....	152 68	91 57
72	A. K. Sinclair	I	700	9	6	....	1	....	213 64	75 13

*Grant for two years, 1915 and 1916.

FIFTH CLASSES,

Inspectorate		Name of School (In the case of rural schools the section number and the name of the township are given)	Post Office
Simcoe, East	73	Victoria Harbour	Victoria Harbour
	74	12 Tay	Waubaushene
Simcoe, S. W.	75	10 Essa	Angus
Sudbury, etc.	76	1 Wallbridge	Byng Inlet
Victoria, West	77	Woodville	Woodville
	78	8 Mariposa	Little Britain
Waterloo, North	79	16 Wellesley	Wellesley
Waterloo, South	80	Hespeler	Hespeler
	81	13 Wilmot	Baden
Welland	82	9 Bertie	Stevensville
Wellington, South	83	6 Erin	Hillsburg
	84	7 West Garafraxa	Belwood
	85	Macdonald Cons.	O. A. C., Guelph
Wentworth	86	5 Ancaster	Ancaster
	87	3 Barton	Mount Hamilton
	88	5 Beverly	Troy
	89	5 Saltfleet	Stoney Creek
	90	3 Binbrook	Binbrook
	91	7 West Flamboro	Millgrove
York, North	92	11 King	Kettleby
	93	23 King	King
	94	12 Whitchurch	Bethesda
York, West	95	Woodbridge	Woodbridge
R. C. Separate Schools—			
Inspector Sullivan	96	2 Ashfield	Kingsbridge
	97	2 Hibbert, McKillop and Logan	Dublin
	98	Wallaceburg	Wallaceburg
Inspector Finn	99	7 Bromley	Douglas
	100	Mattawa	Mattawa
Totals			

1915-1916—Concluded

	Teachers			Pupils		Grade of Fifth Class			Total Value of Approved Equipment	Legislative Grant
	Name of Principal and	Professional Certificate	Annual Salary, 1916	No. of Pupils	Average Daily Attendance	A	B	C		
			$						$ c.	$ c.
73	John A. Gillespie	II	950	17	14	1	....	....	197 73	139 00
74	Wm. McKaughan	II	1,000	9	3	1	....	....	170 58	110 54
75	A. Edmund Harkness	I	750	11	7	....	1	....	79 10	63 43
76	Angus W. Cameron	II	1,000	6	5	....	1	....	83 53	127 62
77	Geo. B. Rennie	II	650	6	3	....	1	....	152 94	79 64
78	Chas. H. Lapp	II	750	5	3	....	1	....	138 97	68 63
79	Helen MacGregor	II	700	3	2	....	1	....	137 38	53 27
80	Jas. D. Ramsay	II	1,400	6	3	1	....	....	346 23	142 22
81	James Kerr	II	900	6	4	1	....	....	220 07	114 84
82	Irene F. Foster	I	800	11	10	....	1	....	155 02	91 78
83	R. R. McKay	II	775	8	6	....	1	....	187 00	72 82
84	Mabel Money	I	725	3	2	....	1	....	107 00	87 61
85	J. A. Macdonald	I	1,225	10	7	1	....	....	493 00	153 90
86	Gordon A. Campbell	II	900	4	2	1	....	....	275 08	118 58
87	William A. Neff	II	900	13	11	1	....	....	314 38	121 16
88	John Hay	II	800	4	3	1	....	....	255 52	109 20
89	Lena M. Field	II	750	5	3	1	....	....	249 95	97 87
90	Marjorie Boyle	II	650	4	2	....	1	....	226 55	61 04
91	John A. Dalton	II	775	4	3	....	1	....	71 01	62 73
92	Frances L. Clunas	II	690	5	3	....	....	1	155 32	50 49
93	Walter Rolling	II	700	3	2	....	....	1	153 11	56 82
94	Isaac Pike	II	710	4	3	....	....	1	170 05	59 38
95	Russell Reid	II	800	2	2	1	....	....	209 35	131 31
96	Sr. M. Eugenia	II	650	3	2	....	1	....	656 87	89 94
97	Mother M. Dolores	I	1,000	36	32	1	....	....	557 44	141 13
98	Mother M. Stella	II	400	7	6	1	....	....	474 36	57 60
99	Sr. M. Helen	II	600	35	29	1	....	....	536 81	96 74
100	Sr. St. Andrè Corsini	II	600	5	3	1	....	....	209 43	201 88
	Totals	.....	*793	931	670	46	42	12	22,756 12	†11,204 73

* Average salary.

† In addition there was paid on equipment, etc., the sum of $130.58 to schools that did not qualify as Fifth Classes in 1915-1916.

APPENDIX J

REPORT OF THE INSPECTOR OF MANUAL TRAINING AND HOUSEHOLD SCIENCE

I. MANUAL TRAINING CENTRES

Location of Centre	Teacher	Salary	No. of Pupils	Grades	Length of Lesson	Accommodation	Equipment	Remarks
OTTAWA								
1 Slater Street School	C. Medcalf.	$2,400	156	Elementary Manual Training is taken in the class rooms with grades Jr. I. to Sr. III. Woodwork is taken in the Manual Training room with grades Jr. IV. to Commercial.	1½ to 2 hours	All the rooms are ordinary school class rooms, in most cases specially built, and in others adapted for Manual Training. They are generally light, airy and well ventilated.	Equipped with 20 benches and all tools for elementary woodworking. The Commercial classes are provided with equipment for copper and brass work.	Mr. C. Medcalf acts as supervisor.
2 Wellington Street School	W. G. Myrick. R. S. Holmes. H. S. Winchester G. F. Rowe. A. Crowson J. J. Carter	$1,175 to $1,600 by $75 annually.	73					The elementary work in the lower grades is well organized, being taken by the Kindergarten teachers in the afternoons under the direction of the Supervisor.
3 Elgin Street School			227					
4 Glashan School			78					
5 First Avenue School			105					
6 Creighton Street School			62					
7 Cambridge Street School			92					
8 Percy Street School			82					
9 Osgoode Street School			134					
10 Manual Arts School			74					
11 Rosemount Avenue School			119					
12 Mutchmore Street School			146					
13 Hopewell School			77					
14 Model School	J.S.Harterre		230	All grades.	¾ to 1 hour.	2 rooms, elementary and advaneed.	Cardboard work, clay modelling, and woodwork.	
TORONTO								
15 Wellesley School	C. T. Yeo.	$1,200 to $1,800 by $100 annually.	238	Junior IV Senior IV	1½ to 2¼ hours.	Elementary woodwork is provided for in a room of the ordinary class room type, the newer rooms being specially fitted.	Each centre is equipped with 20 benches and the ordinary wood working tools. Two centres are equipped for ornamental metal work.	The work is carried on at present without any supervisor.
16 King Edward School	C. G. Mikel.		203					
17 Winchester School	Cecil V. Webb		259					
18 Queen Alexandra School	W.Flummerfelt.		246					
19 Manning Avenue	W. E. Smyth		206					
20 Dewson Street School	E. Slaughter		238					
21 Parkdale School	J. C. Hamilton.		257					
22 Kimberley School	E. Beattie.		257					
23 Annette Street School	O. Close.		214					
24 Kent School	H. G. White.		333					
25 Brown School	H. J. Baker.		269					
26 Oakwood Coll. Institute	J.N. Shorthill		186	S.IV J. IV	1½ to 2¼ hours	These two high schools have in addition to the equipment of the Public School centres, lathes and other machine tools for wood working.		
27 Riverdale Coll. Institute	E. Faw		213	Forms I, II				

28 Essex School	A.J.Rostance	$1,800	280					
29 Ryerson School	G. Pomeroy		231					
30 Perth Avenue	S. W. Davidson.		200					
31 Normal Model School	J. H. Wilkinson.	$1,600	100		1½ hours	In addition to the woodwork Elementary Manual Training is taken throughout the lower grades by the Model School teachers		
32 Kingston Public Schools	A. Hatch.	$1,600	236	III, IV	1½ to 2 hrs,	A basement room	Bench work.	The elementary work is taken by the Manual Training teacher every afternoon in the public schools.
33 Brantford Public School	A. Styles.	$1,300	386	S. IV, J. IV S. III, J.III.	1½ hours	Separate building.	Wood work and wood turning.	Voluntary class Saturday mornings in mechanical drawing.
34 Brantford Coll. Institute	J. A. Mutter.	$1,550	85	I, II	2½ hours	Separate shops provided for bench work. forging, turning and drawing.	20 benches, 4 wood turning lathes, 1 engine lathe, band saw, 8 forges, motors, etc.	The work is carried on in special rooms provided in the Collegiate Institute
35 Brockville Public Schools.	G. E. Cox.	$1,200	230	III, IV	2 hours	Separate building.	27 benches, 1 wood turning lathe.	No Manual Training in Collegiate Institute.
36 Stratford Coll. Institute	J. Tench.	$1,500	300	J. IV to Form III Public and Separate.	1½ and 2 hrs.	Separate building.	Woodshop, forge and machine shop and store room.	
37 Stratford Romeo School	D. W. Gillies.	$1,200	325	J. III to S. IV	1½ to 2 hours	A large house on the school grounds has been remodelled and well equipped for this work.	20 benches with the usual tool equipment.	A well kept and well decorated room.
38 Stratford Normal School	S. Pickles.	$1,600	Normal	Students.	1 hour	Two rooms.	Cardboard work and wood work.	

I. MANUAL TRAINING CENTRES—Continued

Location of Centre	Teacher	Salary	No. of Pupils	Grades	Length of Lesson	Accommodation	Equipment	Remarks
39 Woodstock Coll. Institute.	J. S. Mercer.	$1,550	168	J. IV to Form III	2 hours 2½ hours	Separate building	Bench work, wood turning, forging, machine shop, beaten metal, mechanical drawing.	The Commercial, Second and Third forms take metal work.
40 Guelph Public Schools....	J. T. Power.	$1,425	318	J. III to Com.	1½ to 2 hrs.	47 ft. x 24½ ft. x 13 ft.	7 vices and 1 forge in addition to ordinary wood work,	No Manual Training in the Collegiate Institute.
41 Guelph Machinery Hall...	This offers courses of one academic year for persons wishing to become teachers of Manual Training.							
42 Guelph Consolidated School		$200	47	J. III, J. IV	2½ hours	25 ft. x 33 ft. x 11½ ft.	20 benches with tools.	Manual Training suitable for rural districts.
43 Kitchener Collegiate Institute.....	D. W. Houston.	$1,700	223	J. IV, S. IV; I. II, III	1½ to 2½ hrs.	Wood shop, forge shop, machine shop.	Benches, wood-turning lathes, drawing tables, forges, drill, band saw, grinder.	
44 Hamilton Technical and Art School.....	Fred. Taylor	$1,500	255	Forms I, II of the Collegiate Institute and Form IV of Public Schools	1½ hours		Wood working, wood turning and mechanical drawing.	This accommodation is provided in the Technical School for Collegiate Institute and Public School pupils.
45 Wentworth Street School, Hamilton.....	W. L. Carson	$1,300	235	J. IV to Com.	1½ and 2 hrs.	2 rooms. 24 ft. x 32 ft. x 8 ft. 6 in.	20 benches and usual equipment.	
46 Caroline Street, Hamilton.	A. E. Wilcox.	$1,600	231	J. IV to Com.	1½ and 2 hrs.	22 ft. x 30 ft. x 14 ft.	20 benches and usual tool equipment.	
47 Normal School, Hamilton.	A. J. Painter.	$1,700	136	J. IV to Com.	1½ and 2 hrs.	Two Rooms.	20 benches and usual tool equipment.	In addition to Normal students.

48 King George, Hamilton ...	F. Bowers ..	$1,300	270	J. IV to Com.	1½ to 2 hrs.	Class Room.	20 benches and usual equipment.	
49 Collegiate Inst., London ..	G. A. Andrus	$1,800	200	II	1⅞ hours.	39 ft. x 26 ft. x 15 ft.	30 benches and usual tool equipment.	
50 Normal School, London ...	S. Pickles.	$1,600				Two rooms.	20 benches with usual tool equipment.	Manual Training for Normal Schools.
51 St. George's, London	O. R. Pengelley	$1,200	147	IV	2 hours	30ft. x 30 ft. x 8ft.	20 benches with usual tool equipment.	Basement room.
52 Lorne Avenue. London. ...	J. B. Pengelley	$1,200	114	IV	2 hours.	31ft. x 23 ft. x 8ft.	20 benches with usual tool equipment.	Basement room.
53 Aberdeen Avenue, London.	W. A. Adams	$1,500	143	IV	2 hours.	Ordinary class room.	" "	
54 Queen Alexandra. London.			62	IV	2 hours.	" "	" "	
55 Chesley Avenue, London...								
56 Boyle School, London.....								
57 Tecumseh School, London.								
58 Ryerson School, London...	The rooms in the recently opened London Schools are amongst the best public school manual training rooms in the Province.							
59 Riverview School, London.								
60 Ingersoll Collegiate Inst..	L. R. White.	$600	206	J. IV to F. II	2 hours.	A separate building.	20 benches, forge, lathes.	
61 Cornwall Public School...	D. N. Cornell.	$1,050	95	J. III, IV	2 hours.	Basement.	20 benches and tools.	
62 St. Thomas.....	J. Thompson	$1.100	314	S. III to I	1½ and 2 hrs.	18 ft. x 90 ft.	20 benches with tools.	
63 Galt Collegiate Institute..	F. E. Braucht.	$1,500	234	IV, F. I. II, III	1½ to 2 hours.	47 ft. x 26 ft. x 10 ft.	20 benches and tools.	Band saws, lathes and planer have been added to the equipment.
64 Owen Sound Collegiate Institute.....	W. S. Mann .	$1,200	202	IV, F III	1½ to 2 hours	35 ft. x 10½ ft. x 24 ft.	Bench work wood turning	
65 Rittenhouse School.....	This is a rural school, the basement of which is fitted as a Manual Training room with 6 double benches and the necessary tools							
66 Collingwood.....	J. Sayers	$1,250	240	IV, J. Form I	1½ to 2 hours	A room in the Public Library is used.		
67 North Bay Normal Sch....	A. Chambers	$1,300	Accommodation and equipment as in other Normal Schools.					
68 Peterborough Normal Sch.	A. F. Hagerman	$1,200	Accommodation and equipment as in other Normal Schools.					
69 Peterborough Public Sch..			138	III J IV I Coll I		Two class rooms.	20 benches, with usual tool equipment.	
70 Port Arthur.....	F. G. Phelan	$1,575	142	IV, F. I, II	2 hours.	Two rooms.	20 benches.	

I. MANUAL TRAINING CENTRES—Concluded.

Location of Centre	Teacher	Salary	No. of Pupils	Grades	Length of Lesson	Accommodation	Equipment	Remarks
71 Sault Ste. Marie.....	T. J. Later,	$1,600	168	IV, F. I, II, III	2 hours.	Wood shop, forge shop, drawing room.	26 benches, lathes, forges, etc.	
72 Smith's Falls.....	W. F. Ferguson	$1,600	140	IV, P S I, II S	1½ to 2 hours	Basement room.	Ordinary woodwork equipment.	
73 Douglas Ave, Windsor.....	C. DeGroat	$1,350	232	S III to II F.	1½ hours	Basement rooms.	Ordinary woodwork equipment	
74 Assumption St., Windsor...	Norval McKim.		127					
75 Wyandotte Sch., Windsor..		$1,250	188	S III to II F.	1½ hours	" "	" "	
76 Public School, Walkerville.			60	IV	1½ hours	" "	" "	
77 " " Paris	Temporarily discontinued owing to difficulty of securing part time teacher.							
78 " " Amherstburg								
79 " " Orangeville.	A voluntary class on Saturday morning.							
80 Fort William.....	.....	$1,500	226	S III to F. II	2 hours		" "	
81 Chatham.....	A. V. Shackleton	$1,200	136	IV, I, II	2 hours		" "	
82 Listowel Public Schools ..	Elementary Manual Training and a small woodworking equipment.							

II. HOUSEHOLD SCIENCE CENTRES

Location of Centre	Teacher	Salary	No. of Pupils	Grades	Length of Lesson	Accommodation	Equipment	Remarks
1 Model School, Ottawa.....	A. E. Green.	$1,060	149	All	½ to 1½ hrs,	36 ft x 36ft x 14 ft 18 ft x 18 ft x 14 ft	Cookery. Needlework.	A separate dining-room with service is furnished.
2 Applied Arts Sch., Ottawa	L. L. White G. Calhoun	$800 $1,700		8	1½ hrs.		Cookery. Needlework.	Sewing machines are provided in needlework equipment.
3 First Avenue.....	Lily M. Ross.	$1,200	808					In addition to the teachers named a number of kindergarten teachers take sewing in the lower grades under the Supervisor of Household Science.
	M. M. Johnson	$800			1½ hrs.			
	Helen Plewes	$800						
4 Manual Arts School.....								
5 Cambridge St., Ottawa...								School lunches are served from three centres.

TORONTO								
6 Queen Alexandra School..	L. E. Snell,	$950	280	IV	1½ to 2 hrs.	27 ft x 36 ft x 14 ft	All rooms are equipped alike with accommodation for 24 girls at one time taking cookery.	The work is carried on at present without any supervisor.
7 Dewson Street " ..	E. Calder...	$900	243	"	"	40 ft x 40 ft x 14 ft		
8 King Edward " ..	Mary Foote,	$1,150	293	"	"	36 ft x 24 ft x 13 ft		
9 Wellesley " ..	H. Alexander	$1,100	216	"	"	36 ft x 20 ft x 13 ft		
10 Winchester " ..	J.M.Williams	$1,150	320	"	"	36 ft x 24 ft x 13 ft		
11 Parkdale " ..	Gert. Dobson		287	"	"	36 ft x 24 ft x 13 ft		
12 Kent " ..	H. Hendry..	$700	308	"	"	School kitchen.		
13 Annette St. " ..	H. Wright..	$800	250	"	"	"		
14 Kimberley " ..	A. Carpenter	$850	252	"	"	"		
15 Manning Avenue.....	M. Sinclair..	$800	285	"	"	"		
16 Brown School	Kathleen Vaughan.	$950	276	"	"	"		
17 Oakwood Coll. Inst.	I. Sutherland	$1,100	296					
18 Perth Avenue	C. M. Smythe	$1,200	270					
19 Housewifery Centre— Orde Street.....	.....	.....	Three teachers are employed to give instruction to 231 girls of all grades in general housewifery practice. Each girl receives ½ day's instruction per week. The quarters provided consist of a flat of 7 rooms.					
20 Technical High School ...	.....	.....	Two kitchens are equipped here, and a large and varying number of regular and special students take courses at different periods in various subjects.					
21 Normal School	N. Ewing.	$1,060	Normal School Students and Model School pupils are taken.					
22 Riverdale Coll. Inst..	E. M. Miller.	$1,100	261	J. IV., S. IV I, II	1½ to 2¼ hrs.	A large room well equipped as a kitchen and dining room.		
23 Lee School, Toronto	J. Noble....							
24 Essex School, Toronto								
25 Ryerson School, Toronto ..	J. C. Pease..							
26 Kingston Pub. Schools....	E. A. Booth..	$700	402	III, IV	1½ and 2 hrs.	33 ft x 21 ft x 24 ft	Cookery, needlework	
27 Brantford Coll. Institute..	F.M.McNally	$800	153	IV, F's I, II,	1½ and 2 hrs.	27 ft x 31 ft x 13 ft	Cookery,	
28 Brantford Public Schools..	M. Longstreet	$600	483					
29 Brockville Pub. Schools ..	A. Kendall.	$655	234	III, IV	2 hours.	36 ft x 27 ft x 8½ ft	Cookery.	A separate building.
30 Stratford Normal.....	A. Neville.	$960	Normal School Students only.					
31 Stratford Coll. Institute..	B. A. Miller	$800	239	IV, F. I, II	1½ and 2 hrs.	Kitchen and dining room.	Equipped for 28.	
32 Romeo School, Stratford ..	H. Campbell	$700	295	J. III to S. IV	1½ to 2 hrs.	A large house has been admirably adapted.		
33 Woodstock.....	L. K. White	$750	192	J. IV to F. III	2 hours.	33 ft. x 24 ft x 8 ft	Equipped for 24.	
34 Guelph Pub. School.....	E. MacVannel.	$850	354	III, IV	2 hours.	39 ft x 24 ft x 13 ft	Cookery, needlework.	Girls of Coll. Inst. take no Household Science.

II. HOUSEHOLD SCIENCE CENTRES—Concluded

Location of Centre	Teacher	Salary	No. of Pupils	Grades	Length of Lesson	Accommodation	Equipment	Remarks
35 Guelph Consolidated Sch..	E. J. Rogers	$675	60	All.	2 hours.	32 ft x 27 ftx11½ft	Cookery, needle-work.	A rural school.
36 Kitchener Collegiate Inst..	Marion Boyd	$900	222	IV, F. I, II	1½ to 2⅛ hrs.	Kitchen and dining room.	Cookery, needle-work.	School lunches served.
37 St. Thomas.....	E. Palmer..	$900	253	S. IV, J. IV, I, II	1½ hours.	Kitchen and dining room.	Cookery, needle-work.	
38 Collingwood.....	E. McGregor	$750	309	J. III to F. II	1½ hours.	Kitchen.	Cookery, needle-work.	
39 Port Arthur.....	J. D. Ross	$950	191	J. III to F. II	2 hours.	Kitchen and dining room.	Cookery, needle-work.	
HAMILTON								
40 Wentworth Street.....	M. M. Taylor	$700	269	III, IV	1½ and 2 hrs.	Kitchen.	Cookery, needle-work.	Miss Strong, of the Technical School acts as Supervisor.
41 Caroline Street.....	H. G. Campbell	$650	236	III, IV	"	"	" "	
42 King Edward.....	A. E. Fairlie	$600	274	III, IV	"	"	" "	
43 King George, Hamilton ...	C. Z. Haist	$600	270					
44 Collegiate Institute	I. W. Strong	$800	323	S. III to F. II.	"	"	Cookery.	
45 Normal School, Hamilton..	C. Elliott.	.....	142	S. III to Com.	1½ and 2 hrs.	This is Public School work in addition to the training given to Normal students.		
LONDON								
46 Collegiate Institute.....	M. C. Macpherson.	$1,500	232	I, II, III	1¼ to 1½ hrs.	Kitchen.	Cookery.	
47 Normal School	A. B. Neville	$960	Normal students only.					
48 Talbot Street	I. Craig		62					
49 Boyle School	M. Cook	$550	113	VI, VII, VIII	Two hours.	Kitchen.	Cookery.	
50 Victoria Street.....	.....	$550	124			"	"	
51 Alexandra School	M. Stuart.	$550	74					
52 Chesley Avenue								
53 Aberdeen School.....								
54 Tecumseh School	The new centres opened here are among the best in the Province.							
55 Ryerson School								
56 Riverview School								

57 Ingersoll	E. Neiker	$500	197	J. IV to F. II	2 hrs.	Temporary room.	Cookery, needle-work.	5 classes.
58 Galt Collegiate Institute	G. M. Crowe	$800	226	IV, F.I, II, III	1½ to 2 hrs.	50 ft x 27 ft x 11 ft	Cookery, sewing, laundry.	School lunches served
59 Owen Sound Coll. Institute	F. P. Pritchard	$750	256	IV to F. II	1¾ to 2 hours.	30 ft x 40 ft x 10 ft	Cookery, needle-work.	
60 North Bay Normal	M. C. McKay	Normal students. Public School pupils also take the work here.						
61 Peterborough Nor. Sch.	E. Ferguson	.....	In addition to the Normal students Public School and Collegiate					
62 Peterborough Pub. Schs		$900	Institute pupils take the work at both schools.					
63 Sault Ste. Marie	M. P. Shaw.	$700	158	IV, F.I, II, III	2¼ to 2½ hrs.	Kitchen, dining-room, sewing room.	Equipped with electric stoves.	
64 Niagara Falls	Recently opened.							
65 Niagara Falls South High School	R.V.Gardiner	.....	22	I, II	2 hrs.	Kitchen,	Equipped for 24.	
66 Paris	Grace Munt	$600	108	III, J. IV	2 hrs.	Large kitchen.	"	
67 Belleville	R. G. Templeton.	$600	214	III, IV, F. I, II, III	2 hrs.			
68 Smith's Falls	Flor. Pringle	$700	150	S. IV, F. I, II, III	1¾ hrs.	Kitchen, dining room and sewing room.	Equipped for 24.	Equipped with Electric stoves and ranges.
69 Wyandotte Sch., Windsor	M. Bobier							
70 Douglas Avenue, Windsor		$860	209	S. III, to II	1½ hrs.	Kitchen.	Equipped for 24.	" "
71 Assumption St., "	M. Edwards	$860	186	S. III, to II	1½ hrs.	Kitchen.	Equipped for 24.	" "
72 Walkerville			67	S. III, J. 4	1½ hrs.	Kitchen and dining room.	Equipped for 24.	" "
73 Separate School, Hamilton.	Temporarily closed.							
74 Fort William	E.M.Everson	$1,100	282	S. III, I, II, III	1½ to 2 hrs.	Kitchen.	Equipped for 24.	
75 Chatham	A. Grassie	$900	204	IV, F. I, II	2 hrs.	....	Enamelled steel equipment with Electric stoves.	
76 Oak Ridges, U.S.S. No. 1. King	Elementary Household Science in Rural Schools. A rural school equipment on the lines laid down in the Department's manuals on "Household Management" and "Sewing" is installed in these schools.							
77 Dennis Ave. S.S. No. 28 York, Mt. Dennis								
78 Belle Ave. S.S. No. 28 York, Mt. Dennis								
79 Islington, S.S. No. 8 Etobicoke								

Toronto, December 30th, 1916.

APPENDIX K

THE LIBRARY OF THE DEPARTMENT

THE HONOURABLE R. A. PYNE, M.D., LL.D.,

Minister of Education for Ontario.

SIR,—I respectfully submit the Report of the Library of the Department for 1916. A series of comparative tables are given to set forth the different services rendered by the Library, and to show its growth.

The number of books loaned from year to year has increased rapidly, has indeed all but doubled in the past four years. It is especially gratifying to learn that the demand for books from places outside Toronto, has grown from fifty-eight centres in 1915 to ninety-eight in 1916. This phase of our work is proving very helpful to teachers and students, and deserves every encouragement.

I must, again, draw attention to the crowded condition of the Library, and to the lack of reading and reference rooms for the 261 students in attendance at the Normal School. Because of this lack, these students are deprived of an opportunity to become acquainted with the various educational journals received from month to month, have no place in which to consult the many reference books which the Library contains, and have no facilities for making notes in connection with their studies. Ample space has been provided in all the other Normal Schools for this work. The rooms formerly devoted to these purposes, but given temporarily to the Workmen's Compensation Board, should be restored to the Library, and the students given an opportunity to profit by the large number of books and periodicals provided for them, but, in the main, not available because of the conditions described.

I have the honour to be Sir,

Your obedient servant,

GEO. E. BARNES, *Acting Librarian.*

The Library, Toronto, January 4, 1917.

TABLE A

Number of Books Loaned, 1907-1916

Books given out in the month of—	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
January	787	850	400	1,122	1,013	1,046	950	1,571	2,169	2,251
February	831	883	1,180	893	975	1,138	1,126	1,715	2,063	2,387
March	704	1,062	1,263	594	1,228	1,098	625	1,799	1,784	2,799
April	691	661	464	630	438	719	1,004	738	1,385	1,324
May	739	756	807	622	673	915	1,213	1,362	1,368	1,591
June	456	388	315	395	381	398	956	602	582	617
July	176	227	250	450	298	202	590	753	1,073	1,126
August	124	120	96	119	76	130	132	447	658	611
September	388	312	112	297	188	408	212	405	519	578
October	805	1,011	356	682	289	330	560	1,819	1,482	1,686
November	1,045	1,236	1,271	1,235	1,165	1,031	1,385	2,348	2,328	1,944
December	352	707	247	495	379	533	1,154	2,371	1,631	1,230
Totals	7,098	8,213	6,761	7,534	7,103	7,948	9,907	15,930	17,042	18,144

TABLE B

Number of Books Purchased in 1916

General Works	4	Useful Arts	36
Philosophy	18	Fine Arts	128
Religion	2	Literature	70
Sociology	129	History	122
Philology	50		
Natural Science	37	Total	596

TABLE C

Number of Books Donated to the Library during the Years 1909-1916

——	1909	1910	1911	1912	1913	1914	1915	1916
Text-Books	15	21	27	15	21	13	55	20
Miscellaneous	47	87	110	82	64	72	53	44
Totals	62	108	137	97	85	85	108	64

TABLE D

Number of Newspapers and Magazines Received during the Years 1911-16

——	1911	1912	1913	1914	1915	1916
Number of daily and weekly newspapers received	96	96	96	96	103	104
Number of magazines and other periodicals received	132	131	132	137	127	126
Totals	228	227	228	233	230	230

TABLE E

Books, Magazines, etc., Bound During the Years 1904-1916

1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
81	45	217	58	148	149	171	158	207	188	255	182	70

TABLE F

Number of Periodicals and Magazines Loaned in 1916

January 186	April 149	July 109	October 199
February 178	May 176	August 102	November 197
March 164	June 137	September 120	December 146
			Total 1,863

TABLE G

Number of Reference Books (loans not included) consulted during 1916

January 1,307	April 750	July 1,105	October 986
February 1,515	May 1,007	August 870	November 1,301
March 1,546	June 496	September 423	December 661
			Total 11,967

APPENDIX L

RURAL SCHOOL LIBRARIES, OCT. 1st, 1915, TO OCT. 1st, 1916

Inspectorate	No. of schools purchasing books to the amount of $10.00 during the year	Total amount expended by such schools during the year for books recommended	Total Government grant	No. of rural public school libraries in inspectorate	No. of libraries established during year
		$ c.	$ c.		
Algoma	5	53 42	40 07	47	3
Brant, etc	2	22 35	16 76	78	.....
Bruce, East	3	30 00	22 50	85	.....
Bruce, West	35	483 13	315 60	83	.....
Carleton East	8	118 08	76 49	76	.....
Carleton West and Lanark East	14	211 86	130 68	77	3
Dufferin	17	196 51	145 66	87	8
Dundas	38	653 62	360 08	74	.....
Elgin, East	24	278 67	192 92	75	.....
Elgin, West	.....	.....	.....	29	.....
Essex	27	500 12	255 45	92	1
Frontenac, North, and Addington	9	110 47	78 98	70	1
Frontenac, South	12	144 90	101 83	94	1
Glengarry	1	11 89	8 92	73	.....
Grey, East	3	33 00	24 76	74	.....
Grey, South	43	606 71	400 71	66	.....
Grey, West	9	111 53	76 95	72	.....
Haldimand	19	217 99	157 44	71	.....
Haliburton	.....	.....	.....	71	.....
Halton, etc	8	104 73	67 40	67	.....
Hastings, Centre	3	33 02	24 76	73	.....
Hastings, North, South Nipissing and N. W. Parry Sound	27	396 74	244 54	88	.....
Hastings, South	7	77 38	57 76	50	.....
Huron, East	31	408 63	269 91	84	3
Huron, West	2	21 20	15 91	99	.....
Kenora and Thunder Bay West	5	79 55	47 50	32	3
Kent, East	38	557 87	348 35	70	2
Kent, West	2	21 90	16 43	63	.....
Lambton, East	8	92 77	69 39	84	.....
Lambton, West	3	41 59	25 75	81	.....
Lanark	12	126 97	94 88	67	.....
Leeds and Grenville, No. 1	.....	.....	.....	75	.....
Leeds and Grenville, No. 2	3	40 71	26 50	79	.....
Leeds and Grenville, No. 3	11	118 81	89 09	64	.....
Lennox	.....	.....	.....	73	.....
Lincoln and Pelham Tp	39	516 46	339 64	77	.....
Manitoulin, etc	3	48 88	27 94	84	.....
Middlesex, East	11	134 82	90 25	101	.....
Middlesex, West	4	42 44	31 82	78	.....
Muskoka, South and West	19	245 22	168 70	78	1
Norfolk	2	28 95	18 06	82	.....
Northumberland and Durham, No 1.	4	40 00	30 00	63	.....
Northumberland and Durham, No. 2.	3	57 00	29 00	70	.....
Northumberland and Durham, No. 3.	8	91 41	67 86	62	1
Ontario N., and Parry Sound, N. E.	8	104 62	69 49	72	1
Ontario, South	1	10 00	7 50	63	.....
Oxford, North	12	142 13	102 24	58	1
Oxford, South	5	60 01	41 58	48	.....
Parry Sound, South	7	115 70	66 89	73	.....
Peel	15	178 89	127 60	72	.....
Perth, North	.....	.....	.....	68	.....
Perth, South	6	89 61	49 42	44	.....
Peterborough, East	26	308 40	209 80	71	.....
Peterborough, West, and Victoria, E.	12	147 69	101 32	54	1
Prescott and Russell	18	235 81	158 25	85	2

RURAL SCHOOL LIBRARIES, OCT. 1st, 1915, TO OCT. 1st, 1916.—Concluded

Inspectorate	No. of schools purchasing books to the amount of $10.00 during the year	Total amount expended by such schools during the year for books recommended	Total Government grant	No. of rural public school libraries in inspectorate	No. of libraries established during year
		$ c.	$ c.		
Prince Edward	10	114 14	84 88	71	.....
Rainy River and Thunder Bay E.	1	44 25	10 00	52	.....
Renfrew, North	8	104 83	67 48	74	.....
Renfrew, South	2	32 92	18 11	80	.....
Simcoe, East	4	53 95	34 71	57	.....
Simcoe, North	11	147 85	94 77	58	.....
Simcoe, South West	1	10 01	7 51	72	.....
Stormont	22	311 93	199 64	75	.....
Sudbury, North Nipissing, etc	10	152 22	93 42	43	.....
Timiskaming	.....	.....	.....	38	.....
Victoria, West	16	181 72	131 76	72	.....
Waterloo, North, No. 1	21	301 40	194 63	40	3
Waterloo, South, No. 2	15	230 66	142 28	40	1
Welland	10	129 01	86 87	59	1
Wellington, North	7	95 06	65 06	49	3
Wellington, South	23	323 81	199 15	67	.....
Wentworth	22	396 30	209 87	65	.....
York, East	25	354 86	219 13	52	2
York, North	28	332 94	234 45	65	.....
York, West	8	113 08	74 43	40	1
Roman Catholic Separate Schools:					
Inspector Finn	11	124 10	110 00	31	.....
" Jones	6	92 82	60 00	21	3
" Lee	30	332 13	300 00	48	.....
" Power	.....	.....	.....	1	.....
" Sullivan	3	38 26	30 00	32	.....
Totals, 1915-1916	926	12,522 41	8,209 48	5,248	46
Totals, 1914-1915	1,405	18,943 03	8,177 44	5,137	62
Increases	.....	.....	32 04	111	.....
Decreases	479	6,420 62	.....	.....	16

APPENDIX M

CADET CORPS, 1916

Collegiate Institutes, High, Continuation, Public and Separate Schools having Cadet Corps with at least twenty members between the ages of 14 and 18 years in the case of Public and Separate Schools, and between 16 and 18 years in other cases.

COLLEGIATE INSTITUTES: Barrie, Brantford, Brockville, Clinton, Cobourg, Collingwood, Fort William, Galt, Goderich, Guelph, Hamilton, Ingersoll, Kingston, Kitchener-Waterloo, Lindsay, London, Morrisburg, Napanee, North Bay, Orillia, Ottawa, Owen Sound, Perth, Peterborough, Picton, Port Arthur, Renfrew, Ridgetown, St. Mary's, St. Thomas, Sarnia, Seaforth, Smith's Falls, Stratford, Toronto (Harbord, Humberside, Jarvis, Malvern, Oakwood, Parkdale, Riverdale), Vankleek Hill, Windsor, and Woodstock. Total, 44.

HIGH SCHOOLS: Belleville, Caledonia, Campbellford, Carleton Place, Essex, Fergus, Haileybury, Iroquois, Kemptville, Meaford, Mitchell, Mount Forest, Newmarket, Oshawa, Parry Sound, Pembroke, Port Hope, Prescott, Sault St. Marie, Sydenham, Tillsonburg, Toronto (North, and Technical), Trenton, Watford, Welland, Wiarton. Total, 27.

CONTINUATION SCHOOLS: Cannington, Lakefield and Southampton. Total, 3.

PUBLIC SCHOOLS: Belleville (2), Blenheim, Brantford (4), Brockville, Carleton Place, Chatham, Dresden, Dundas, Fort Frances, Fort William (5), Guelph (2), Hamilton (9), Keewatin, Kenora, London, Midland, North Bay, Ottawa (12), Port Arthur (4), Port Hope, St. Catharines, St. Thomas, Shallow Lake, Stratford, and Toronto (49). Total, 104.

R. C. SEPARATE SCHOOLS: Hamilton, and Toronto (2). Total, 3.

Total number of Cadet Corps, 181.

APPENDIX N

SUPERANNUATED TEACHERS

* Allowances Granted during 1916

Regis. No.	Name	Age	Post Office	Years of Service	Allowance
					$ c.
1254	†Batchelor, Wm. A.....	68	Belleville	8	84 00
1255	Cowling, Robert.....	60	704 Logan Ave., Toronto	24½	168 50
1256	Gray, Henry	62	760 Keele St., Toronto.....	43¾	304 50
1257	‡Squair, J	65	368 Palmerston Ave., Toronto	35	124 50
1258	‡Harvey, Rowland O	63	Woodbridge.....	26	91 25
1259	‡Witheril, Ebenezer Rufus ..	63	199 Carlton St., Toronto	42¼	149 00
1260	‡Smith, Wm. Henry	69	Port Dover	51½	156 50
1261	‡Morton, Wm. Connor.....	65	6 Mapleside Ave., Hamilton .	44½	156 00
1262	Sinclair, Samuel Bower	61	Gordon Bay.....	24	168 00
1263	‡Kinney, Robt. M. D	77	Box 335, Brockville	55	194 50
1264	May, Wm. Fisher	64	Mitchell	27	185 00

Summary for Years 1882-1916

Year	Number of Teachers on List	Expenditure for the Year	Gross Contributions to the Fund	Amount Refunded to Teachers
		$ c.	$ c.	$ c.
1882.....	422	51,000 00	13,501 08	3,660 10
1887.....	454	58,295 33	1,489 00	3,815 80
1892.....	456	63,750 00	1,313 50	786 86
1897.	424	62,800 33	847 00	620 27
1902....	407	64,244 92	1,073 50	722 78
1907.....	375	63,018 55	766 00	764 54
1912.....	297	§52,696 90	§504 65	§443 01
1915.....	274	§51,927 75	§560 35	§219 05
1916.....	266	§50,909 50	§464 52	§220 12

Two teachers' subscriptions were withdrawn from the fund during the year ending 31st October, 1916.

*As the sum of $4 is deducted from each Superannuated Teacher's allowance as subscription to the fund, the payments were $4 less in each case than given in this list.

†Payment commenced September, 1915.

‡Payment commenced September, 1916.

§For fiscal year ending 31st October.

APPENDIX O

FINANCIAL STATEMENT OF THE FACULTIES OF EDUCATION

I.—UNIVERSITY OF TORONTO FACULTY OF EDUCATION

Financial Statement for the Year Ended 30th June, 1916.

Receipts

Provincial Grant:		
Received on account thereof	$6,000 00	
Balance for 1915-16 still due from Provincial Government	9,000 00	
		$15,000 00
Fees:		
Teachers in training	$7,849 00	
Pupils in University Schools	23.106 50	
		$30,955 50
		$45,955 50

Expenditures

1. *Salaries.*

W. Pakenham, Professor of History and Science of Education (also Dean of Faculty), 12 mos. to 30th June	$3,800 00
Associate Professors, each 12 mos. to 30 June:	
H. J. Crawford, also Headmaster of University Schools	3,200 00
P. Sandiford	3,000 00
Lecturers in Methods; also Chief Instructors, University Schools, each 12 mos. to 30th June:	
G. A. Cornish, Science	2,500 00
J. T. Crawford, Mathematics	2,500 00
O. J. Stevenson, English and History, 1st July to 31st August, at $2,300 (resigned)	383 32
G. M. Jones, English (10 payments)	2,500 00
W. C. Ferguson, French and German	2,400 00
F. E. Coombs, Elementary Subjects	2,400 00
S. W. Perry, Art and Commercial Work	2,200 00
Assistant Instructors in University Schools:	
T. M. Porter, 12 mos. to 30th June	2,200 00
H. A. Grainger, 12 mos. to 30th June	2,200 00
J. A. Irwin, 12 mos. to 30th June	2,100 00
J. O. Carlisle, 12 mos. to 30th June	2,000 00
J. G. Workman, 12 mos. to 30th June	2,000 00
W. J. Dunlop, 12 mos. to 30th June	1,900 00
A. N. Scarrow, also Instructor in Faculty of Education, 12 mos. to 30th June	1,900 00
H. G. Manning, at $1,800 (war service, half pay)	900 00
A. R. M. Lower, substitute for Manning, salary for 10 teaching months	1,600 00
G. A. Cline, at $1,800 (war service, half pay)	900 00
C. L. Brown, substitute for Cline, salary for 10 teaching months	1,800 00
W. L. C. Richardson, 12 mos. to 30th June	1,800 00
G. N. Bramfitt, also Instructor in Faculty of Education, at $1,800, 1st July to 30th September, $450; war service, half pay, from 1st October, $675	1,125 00
D. J. Gray, substitute for Bramfitt, salary for 9 teaching months	1,350 00
N. L. Murch, 12 mos. salary (10 payments)	1,700 00
D. E. Hamilton, 12 mos. to 30th June	1,600 00
E. L. Daniher, 12 mos. salary (10 payments)	1,500 00
Miss L. L. Ockley, Instructor in Household Science (Sessional, paid also in Faculty of Household Science)	100 00

Supervisors of Practice-teaching (Sessional):		
J. Jeffries, High Schools	100 00	
W. E. Groves, Public Schools	100 00	
Miss L. Swinarton, Stenographer in Dean's Office, 12 mos. to 30th June	675 00	
		$54,433 32

2. *Education Building and Department.*

(*a*) Maintenance of Building:		
Fuel	$1,122 84	
Light	433 34	
Water	142 52	
Caretaker's supplies	311 82	
Cleaning	1,171 68	
Repairs and renewals	855 67	
Engineer and caretaker, S. Hunter, 12 mos. to 30th June	1,200 00	
Firemen at $50 per month:		
R. Bullock, 4½ months	225 00	
J. Banford, 3½ months	175 00	
A. Bennett, 29 days	48 32	
Messengers:		
S. Green, 29 weeks, 4 days, at $4 per week	118 67	
A. Scott, 21 weeks, 4 days, at $4.75 per week (paid also as laboratory attendant under Department)	103 71	
		$5,908 57
(*b*) Maintenance of Department:		
Payment to City Board of Education for use of schools, 22 rooms at $1.50 a room	$3,300 00	
Clerical and laboratory assistance	645 75	
Office expenses, printing, postage, class-room supplies and sundries	3,766 84	
		7,712 59
		$68,054 48

NOTE.—In the above statement no charge has been made upon the Faculty of Education for any portion of the general expenses of University administration, such as Library, Examination, etc.

F. A. MOURÉ, *Bursar.*

Toronto, 19th October, 1916.

II.—UNIVERSITY OF QUEEN'S COLLEGE FACULTY OF EDUCATION

Financial Statement for the Year 1916

Receipts

Surplus from 1915	$113 44	
Fees	1,808 00	
Ontario Government	12,000 00	
Overdraft	08	
		$13,921 52

Expenditures

Salaries:		
Dean Coleman	$3,700 00	
W. E. Macpherson	2,750 00	
Arts Professors	125 00	
Summer School	300 00	
Willa Atkins	423 00	
Edna Booth	100 00	
Nora Strowger	50 00	
Victoria Wiltshire	50 00	
Alice King	100 00	
		7,598 00

Board of Education, as per agreement		5,000 00
Travelling Expenses:		
W. E. Macpherson	$22 25	
Dean Coleman	121 00	
W. G. Anderson	13 45	
R. H. Hicks	25 00	
		181 70
Presiding Examiners		240 40
Printing and Stationery:		
Paul Munro	$27 50	
Jackson Press	163 55	
R. Uglow & Co.	68 41	
C. W. Lindsay	40 00	
G. M. Hendry & Co.	12 00	
M. Kirkpatrick	53 05	
Journal of Commerce	1 00	
British Whig Pub. Co.	60	
Stamps	75 00	
Copp, Clarke Co.	1 12	
		442 23
Advertising, Queen's University Share		250 00
Library, Miss L. Saunders		150 00
Office Furniture and Equipment:		
R. J. Lindsay	$1 64	
The Topley Co.	2 55	
T. F. Harrison Co.	8 75	
		12 94
Sundries:		
Bell Telephone Co.	$40 55	
Express and Telegrams	5 70	
		46 25
		$13,921 52

Audited and found correct.

January 9th, 1917. R. E. Burns, C.A.

APPENDIX P

LIST OF INSPECTORATES AND INSPECTORS

Inspectorates	Public School Inspectors	Post Office
Algoma District (in part); Cockburn Island; City of Sault Ste. Marie; Towns of Bruce Mines, Steelton, Thessalon	L. A. Green, B.A.	Sault Ste. Marie.
Brant County; Town of Paris; Sections 3, 8, 9, 14, 15, 17, 19, 21, 25 of Townsend Tp., Sections 1, 2, 10, 11, 12, 13 and 14 of Windham Tp. and Village of Waterford in Norfolk Co.	T. W. Standing, B.A.	Brantford.
Bruce, East; Towns of Chesley, Walkerton, Wiarton; Villages of Hepworth, Tara	John McCool, M.A.	Walkerton.
Bruce, West; Towns of Kincardine, Southampton; Villages of Lucknow, Paisley, Port Elgin, Teeswater, Tiverton	W. F. Bald, B.A.	Port Elgin.
Carleton, East; Town of Eastview	Thos. Jamieson, B.A.	Ottawa, 115 Strathcona Ave.
Carleton, West, and Lanark, East; Towns of Almonte, Carleton Place; Village of Richmond (Joint Inspectorate)	Willis C. Froats, M.A., B.Pæd.	Carleton Place.
Dufferin; Town of Orangeville; Villages of Grand Valley, Shelburne	W. R. Liddy, B.A.	Orangeville.
Dundas; Villages of Chesterville, Iroquois, Morrisburg, Winchester	J. W. Forrester, M.A.	Winchester.
Elgin, East; Town of Aylmer; Villages of Springfield, Vienna	J. C. Smith, B.A.	St. Thomas.
Elgin, West; City of St. Thomas; Villages of Dutton, Rodney, Port Stanley, West Lorne (Joint Inspectorate)	John A. Taylor, B.A.	St. Thomas.
Essex; Towns of Amherstburg, Essex, Ford, Kingsville, Leamington; Villages of Belle River, St. Clair Beach	D. A. Maxwell, B.A., LL.B., Ph.D.	Windsor.
Essex, N. (in part only)	W. J. Summerby	North Bay.
Frontenac, South; Villages of Garden Island, Portsmouth	S. A. Truscott, M.A.	Kingston.
Frontenac, North; and Addington (Joint Inspectorate)	M. R. Reid, M.A.	Sharbot Lake.
Glengarry; Town of Alexandria; Villages of Lancaster, Maxville	J. W. Crewson, B.A.	Alexandria.
Grey, East; Towns of Meaford, Thornbury; Village of Flesherton	Samuel Huff, B.A.	Meaford.
Grey, West; Town of Owen Sound; Villages of Chatsworth, Shallow Lake	H. H. Burgess, B.A.	Owen Sound.
Grey, South; Towns of Durham, Hanover; Villages of Dundalk, Markdale, Neustadt	N. W. Campbell, B.A.	Durham.
Haldimand; Town of Dunnville; Villages of Caledonia, Cayuga, Hagersville, Jarvis	Clarke Moses	Caledonia.
Haliburton and Muskoka East; Town of Huntsville (Joint Inspectorate)	R. O. White	Minden.
Halton; Sections 12, 13, 14 and 15 Beverly, 6 and 7 E. Flamboro, 9 and 10 W. Flamboro; Towns of Burlington, Milton, Oakville; Villages of Acton, Georgetown	James M. Denyes, B.A.	Milton.
Hastings Centre; Villages of Madoc, Marmora, Stirling, Tweed	J. E. Minns, B.A.	Madoc.
Hastings, South, and City of Belleville; Towns of Deseronto, Trenton (Joint Inspectorate)	H. J. Clarke, B.A.	Belleville.

List of Inspectorates and Inspectors—Continued

Inspectorates	Public School Inspectors	Post Office
Hastings, North; South Nipissing, and South-East Parry Sound Districts; Towns of Powassan, Trout Creek; Villages of Bancroft, South River, Sundridge (Joint Inspectorate)	Jas. Colling, B.A.	Bancroft.
Huron, East; Towns of Clinton, Seaforth, Wingham; Villages of Blyth, Brussels, Wroxeter	John M. Field, B.A., Ph.D.	Goderich.
Huron, West; Town of Goderich; Villages of Bayfield, Exeter, Hensall	J. Elgin Tom	Goderich.
Kenora District, and Thunder Bay (West); City of Port Arthur; Towns of Dryden, Keewatin, Kenora, Sioux Lookout (Joint Inspectorate)	John Ritchie	Port Arthur.
Kent, East; Towns of Blenheim, Bothwell, Dresden, Ridgetown; Village of Thamesville	Rev. W. H. G. Colles	Chatham.
Kent, West, and City of Chatham; Towns of Tilbury, Wallaceburg; Village of Wheatley (Joint Inspectorate)	J. H. Smith, M.A.	Chatham.
Lambton, East (No. 2); Town of Petrolea; Villages of Alvinston, Arkona, Oil Springs, Watford	N. McDougall, B.A.	Petrolea.
Lambton, West (No. 1); City of Sarnia; Town of Forest; Villages of Courtright, Point Edward, Thedford, Wyoming	Henry Conn, B.A.	Sarnia.
Lanark, West; Towns of Perth, Smith's Falls; Village of Lanark (Joint Inspectorate)	F. L. Michell, M.A.	Perth.
Lanark, East (see Carleton West).		
Leeds and Grenville (No. 1); Town of Gananoque; Villages of Newboro, Westport	James G. McGuire, M.A.	Brockville.
Leeds and Grenville (No. 2); Town of Brockville; Village of Athens (Joint Inspectorate)	W. C. Dowsley, M.A.	Brockville.
Leeds and Grenville (No. 3); Town of Prescott; Villages of Cardinal, Kemptville, Merrickville (Joint Inspectorate)	T. A. Craig	Kemptville.
Lennox; Town of Napanee; Villages of Bath, Newburgh (see also Frontenac, N.)	E. J. Corkhill, B.A.	Napanee.
Lincoln, and Pelham Tp; Towns of Niagara, Thorold; Villages of Beamsville, Grimsby, Merritton, Port Dalhousie (Joint Inspectorate)	W. W. Ireland, M.A.	St. Catharines.
Manitoulin Dist., Algoma Dist. (in part); Sudbury Dist. (in part); Towns of Blind River, Gore Bay, Little Current, Massey, Webbwood	James W. Hagan, M.A.	Gore Bay.
Middlesex, East; Village of Lucan	P. J. Thompson, B.A.	London.
Middlesex, West; Towns of Parkhill, Strathroy; Villages of Ailsa Craig, Glencoe, Newbury, Wardsville	H. D. Johnson	Strathroy.
Muskoka, South and West, District; Towns of Bala, Bracebridge, Gravenhurst; Village of Port Carling	H. R. Scovell, B.A.	Bracebridge.
Muskoka, East (see Haliburton).		
Nipissing, North (see Sudbury Dist.).		
Nipissing, South (see Hastings North).		
Norfolk; Town of Simcoe; Villages of Delhi, Port Dover, Port Rowan (see Brant Co.)	H. Frank Cook, B.A.	Simcoe.

List of Inspectorates and Inspectors—Continued

Inspectorates	Public School Inspectors	Post Office
Northumberland and Durham, West, No 1; Towns of Bowmanville, Port Hope; Village of Newcastle	W. E. Tilley, M.A., Ph.D.	Bowmanville.
Northumberland and Durham, Centre, No. 2; Town of Cobourg; Village of Millbrook	Albert Odell	Cobourg.
Northumberland and Durham, East, No. 3; Town of Campbellford; Villages of Brighton, Colborne, Hastings	Robert Boyes	Campbellford.
Ontario, North; North-East Parry Sound; Town of Uxbridge; Villages of Beaverton, Cannington (Joint Inspectorate).	T. R. Ferguson, M.A.	Uxbridge.
Ontario, South; Towns of Oshawa, Whitby; Village of Port Perry	R. A. Hutchison, B.A.	Whitby.
Oxford, North, and City of Woodstock; Villages of Embro, Tavistock (Joint Inspectorate)	J. M. Cole	Woodstock.
Oxford, South; Towns of Ingersoll, Tillsonburg; Village of Norwich (Joint Inspectorate)	R. A. Paterson, B.A.	Ingersoll.
Parry Sound, South, District; Towns of Kearney, Parry Sound; Village of Burk's Falls	J. L. Moore, B.A.	Parry Sound.
Parry Sound, South-East (see Hastings, North).		
Parry Sound, North-West (see Sudbury).		
Parry Sound, North-East (see Ontario, North).		
Peel; Town of Brampton; Villages of Bolton, Streetsville	W. J. Galbraith, M.A.	Brampton.
Perth, North; Towns of Listowel, Mitchell, St. Mary's; Village of Milverton.	William Irwin, B.A.	Stratford.
Perth, South, and City of Stratford (Joint Inspectorate)	James H. Smith, B.A.	Stratford.
Peterborough, East; Villages of Havelock, Lakefield, Norwood	Richard Lees, M.A.	Peterborough.
Peterborough, West, and Victoria, East; Town of Lindsay; Villages of Bobcaygeon, Omemee (Joint Inspectorate)	G. E. Broderick	Lindsay.
Prescott and Russell; Towns of Hawkesbury, Rockland, Vankleek Hill; Villages of Casselman, L'Orignal	John Nelson, B.A.	Vankleek Hill.
Prince Edward; Town of Picton; Villages of Bloomfield, Wellington	John E. Benson, M.A.	Picton.
Rainy River District, Thunder Bay East, No. 1 Missanabie, No. 1 Chapleau; City of Fort William; Towns of Fort Frances, Rainy River (Joint Inspectorate).	C. McDowell, M.A.	Fort William.
Renfrew, North; Town of Pembroke; Village of Cobden	I. D. Breuls, B.A.	Pembroke.
Renfrew, South; Towns of Arnprior, Renfrew; Villages of Eganville, Killaloe Station	G. G. McNab, M.A.	Renfrew.
Simcoe, North; Towns of Barrie, Collingwood, Penetanguishene	Joseph L. Garvin, B.A.	Barrie.
Simcoe, South; Towns of Alliston, Stayner; Villages of Beeton, Bradford, Creemore, Tottenham	Edwin Longman	Barrie.
Simcoe, East; Towns of Midland, Orillia; Villages of Coldwater, Victoria Harbour	Isaac Day, B.A.	Orillia.
Stormont; Town of Cornwall; Village of Finch	James Froats, M.A.	Cornwall.

List of Inspectorates and Inspectors—Continued

Inspectorates	Public School Inspectors	Post Office
Sudbury District (in part), North Nipissing and North-West Parry Sound; Towns of Bonfield, Cache Bay, Chelmsford, Copper Cliff, Frood Mine, Mattawa, North Bay, Sturgeon Falls, Sudbury	D. M. Christie, B.A.	Sudbury.
Thunder Bay (see Kenora and Rainy River).		
Timiskaming District, Towns of Charlton, Cobalt, Cochrane, Englehart, Haileybury, Iroquois Falls, Latchford, Matheson, New Liskeard, Timmins; Village of Thornloe	W. J. Hallett, B.A., B.Pæd.	Haileybury.
Victoria, West; Villages of Fenelon Falls, Sturgeon Point, Woodville	W. H. Stevens, B.A.	Lindsay.
Victoria, East (see Peterborough West).		
Waterloo, N. (No. 1); City of Kitchener; Town of Waterloo; Village of Elmira.	F. W. Sheppard	Kitchener.
Waterloo, S. (No. 2); City of Galt; Towns of Hespeler, Preston; Villages of Ayr, New Hamburg	Lambert Norman, B.A.	Galt.
Welland; Towns of Bridgeburg, Welland; Villages of Chippawa, Fort Erie, Humberstone, Port Colborne. (Thorold Town and Pelham Tp. are under Lincoln Inspector). (Joint Inspectorate).	John W. Marshall, B.A.	Welland.
Wellington, North; Towns of Harriston, Mount Forest, Palmerston; Village of Clifford	Robt. Galbraith, B.A.	Mount Forest.
Wellington, South; Villages of Arthur, Drayton, Elora, Erin, Fergus	J. J. Craig, B.A.	Fergus.
Wentworth, Town of Dundas; Village of Waterdown	J. B. Robinson, B.A., B.Pæd.	Hamilton.
York, North; Towns of Aurora, Newmarket; Villages of Holland Landing, Sutton West	C. W. Mulloy, B.A.	Aurora.
York, West; Town of Weston; Villages of Mimico, New Toronto, Woodbridge	A. L. Campbell, M.A.	Weston.
York, East; Town of Leaside; Villages of Markham, Richmond Hill Stouffville.	A. A. Jordan, B.A.	Toronto, 43 Orchard View Blvd.
Brantford, City of	E. E. C. Kilmer, B.A.	Brantford.
Guelph, do	Wm. Tytler, B.A.	Guelph.
Hamilton, do	W. H. Ballard, M.A.	Hamilton.
do do	Jas. Gill, B.A., B.Pæd	Hamilton.
Kingston, do	J. Russell Stuart	Kingston.
London, do	C. B. Edwards, B.A.	London.
Niagara Falls do, and St. Catharines	D. C. Hetherington	St. Catharines.
Ottawa, do	J. H. Putman, B.A., D.Pæd.	Ottawa.
do do	E. T. Slemon, B.A., D.Pæd.	Ottawa.
Peterborough, do	A. Mowat, B.A.	Peterborough.
Toronto, do	R. H. Cowley, M.A., Chief Insp.	Toronto.
do do	W. F. Chapman, B.A.	Toronto.
do do	W. H. Elliott, B.A.	Toronto.
do do	E. W. Bruce, M.A.	Toronto.
do do	Jos. W. Rogers, M.A.	Toronto.
do do	Geo. H. Armstrong, M.A., B.Pæd	Toronto.
do do	Henry Ward, B.A.	Toronto.
do do	D. D. Moshier, B.A., B.Pæd.	Toronto.
Windsor, do, and Towns of Sandwich and Walkerville	Robt. Meade, M.A.	Windsor.

List of Inspectorates and Inspectors—Concluded

R.C. Separate School Inspectors

J. F. Power, M.A. ..... Toronto, 33 Dalton Road.
J. F. Sullivan, B.A. ..... London, 873 Hellmuth Avenue.
Jas. E. Jones, B.A. ..... Ottawa, 104 Henderson Street.
J. P. Finn, B.A. ..... Ottawa, 93 Fourth Avenue.
W. J. Lee, B.A. ..... Toronto, 434 Brunswick Avenue.

English-French Public and Separate School Inspectors

W. J. Summerby ..... North Bay.
L. E. O. Payment, M.A. ..... Ottawa, 12 Tormey Street.
Thomas Swift ..... Ottawa, 320 Cooper Street.
J. S. Gratton ..... Toronto, Parliament Buildings.

Chief Inspector of Public and Separate Schools

John Waugh, M.A., D.Pæd ..... Toronto, Parliament Buildings.

Director of Industrial and Technical Education and Inspector of Normal Schools

F. W. Merchant, M.A., D.Pæd ..... Toronto, Parliament Buildings.

Assistant Inspector of Industrial and Technical Education

G. J. McKay, B.Sc. ..... Toronto, Parliament Buildings.

High School Inspectors

H. B. Spotton, M.A., LL.D. ..... Toronto, 426 Markham Street.
J. A. Houston, M.A. ..... Toronto, 105 Roxborough Street West.
I. M. Levan, B.A ..... Woodstock.

Continuation School Inspectors

G. K. Mills, B.A. ..... Toronto, Parliament Buildings.
J. P. Hoag, B.A. ..... Toronto, Parliament Buildings.

Manual Training and Household Science Inspector

Albert H. Leake ..... Toronto, 378a Markham Street.

Inspector of Elementary Agricultural Education

J. B. Dandeno, B.A., Ph.D. ..... Toronto, 73 Grosvenor St.

APPENDIX Q

ADMISSION OF CANDIDATES TO COLLEGIATE INSTITUTES AND HIGH SCHOOLS

JUNIOR HIGH SCHOOL ENTRANCE EXAMINATION, 1916

Collegiate Institutes	Examined	Passed
Barrie	71	64
Brantford	189	121
Brockville	125	102
Chatham	133	100
Clinton	58	40
Cobourg	96	82
Collingwood	89	75
Fort William	119	108
Galt	186	163
Goderich	92	41
Guelph	169	142
Hamliton	436	381
Ingersoll	76	54
Kingston	234	147
Kitchener-Waterloo	253	197
Lindsay	117	95
London	493	389
Morrisburg	27	18
Napanee	97	55
Niagara Falls	93	69
North Bay	113	94
Orillia	124	94
Ottawa	766	521
Owen Sound	210	159
Perth	119	64
Peterborough	212	177
Picton	63	40
Port Arthur	136	86
Renfrew	109	65
Ridgetown	60	36
St. Catharines	130	97
St. Mary's	75	51
St. Thomas	213	167
Sarnia	164	118
Seaforth	54	43
Smith's Falls	96	70
Stratford	185	160
Strathroy	115	78
Toronto, Harbord St.	158	18
Toronto, Parkdale	63	28
Toronto, Jarvis	49	11
Toronto, Humberside	121	62
Toronto, Malvern Ave.	11	2
Toronto, Oakwood	76	29
Toronto, Riverdale	102	37
Toronto, admitted on Principals' certificate	1,961	1,961
Vankleek Hill	97	43
Windsor	253	202
Woodstock	131	88
Totals	9,119	7,035
High Schools		
Alexandria	81	44
Alliston	39	16
Almonte	44	23
Amherstburg	52	33
Arnprior	65	51
Arthur	49	23
Athens	47	24
Aurora	53	39
Avonmore	34	24
Aylmer	77	47
Beamsville	39	23
Belleville	109	87
Bowmanville	61	52
Bradford	45	27
Brampton	67	40
Brighton	94	42
Caledonia	30	14
Campbellford	74	32
Carleton Place	53	15
Cayuga	49	20
Chatsworth	37	25
Chesley	50	32
Chesterville	42	27
Colborne	26	22
Cornwall	150	96
Deseronto	32	20
Dundalk	31	16
Dundas	67	49
Dunnville	49	29
Durham	62	36
Dutton	41	31
Elora	40	23
Essex	91	56
Fergus	71	39
Flesherton	31	21
Forest	39	12
Gananoque	46	30
Georgetown	44	29
Glencoe	49	32
Gravenhurst	34	16
Grimsby	53	34
Hagersville	32	22
Haileybury	66	40
Harriston	30	23
Hawkesbury	54	25
Iroquois	26	19
Kemptville	60	28
Kenora	47	31
Kincardine	49	41
Leamington	57	35
Listowel	75	49
Lucan	62	39
Madoc	52	37
Markdale	32	19
Markham	50	35
Meaford	81	52
Midland	75	53
Mitchell	70	45

JUNIOR HIGH SCHOOL ENTRANCE EXAMINATION, 1916.—Continued

High Schools.—Concluded	Examined	Passed
Morewood	10	7
Mount Forest	73	51
Newburgh	57	23
Newcastle	22	8
Newmarket	58	40
Niagara	17	9
Niagara Falls South	45	29
Norwood	38	28
Oakville	62	45
Omemee	41	20
Orangeville	43	18
Oshawa	92	69
Paris	46	35
Parkhill	56	31
Pembroke	158	113
Penetanguishene	44	34
Petrolea	60	38
Plantagenet	47	28
Port Dover	31	16
Port Elgin	44	26
Port Hope	74	60
Port Perry	57	36
Port Rowan	23	18
Prescott	68	38
Richmond Hill	46	25
Rockland	29	14
Sault Ste. Marie	136	101
Shelburne	49	25
Simcoe	72	57
Smithville	13	11
Stirling	55	42
Streetsville	13	12
Sudbury	68	38
Sydenham	49	26
Thorold	31	18
Tillsonburg	60	29
Toronto, North	19	4
Toronto Technical	23	11
Trenton	43	36
Uxbridge	44	30
Vienna	31	17
Walkerton	38	33
Wardsville	24	13
Waterdown	42	21
Waterford	41	30
Watford	49	38
Welland	75	49
Weston	105	69
Whitby	59	36
Wiarton	55	28
Williamstown	28	20
Winchester	47	34
Wingham	50	30
Totals	5,825	3,661

Other Places	Examined	Passed
Aberfoyle	46	27
Acton	33	26
Agincourt	47	26
Alvinston	29	20
Ameliasburg	27	13
Ancaster	25	12
Angus	8	2
Apsley	7	3
Arkona	19	9
Ashton	16	11
Aultsville	16	11
Ayr	15	10
Ayton	13	7
Bailieboro'	22	13
Bancroft	49	32
Barriefield	38	19
Bath	20	14
Battersea	20	10
Bayfield	11	10
Beachburg	52	32
Beaverton	36	18
Beeton	16	8
Belleville, County Centre	55	26
Belle River	25	9
Belmont	31	21
Bethany	12	7
Billing's Bridge	24	12
Binbrook	14	5
Blackstock	16	11
Blenheim	68	40
Blind River	18	11
Bloomfield	14	14
Blyth	46	24
Bobcaygeon	16	14
Bolton	31	17
Bothwell	24	12
Bracebridge	109	61
Bridgeburg	30	19
Brigden	21	11
Brownsville	11	9
Bruce Mines	30	13
Brussels	43	36
Burford	33	16
Burgessville	16	12
Burk's Falls	35	21
Burlington	42	37
Burritt's Rapids	4	1
Caistor Centre	7	6
Cannington	30	19
Cardinal	33	3
Cargill	16	12
Carp	19	16
Castleton	9	6
Cataraqui	36	19
Chapleau	28	15
Charleston	31	12
Chester	27	16
Claremont	22	15
Clifford	11	10
Cobalt	28	17
Cobden	68	36
Coboconk	22	9
Cochrane	12	5
Coldwater	26	15
Comber	27	9
Coniston	14	9
Cookstown	22	3

JUNIOR HIGH SCHOOL ENTRANCE EXAMINATION, 1916—Continued

Other Places—Continued	Examined	Passed	Other Places—Continued	Examined	Passed
Copper Cliff	17	14	Hepworth	8	5
Courtright	25	13	Highgate	36	13
Crediton	19	7	Hillsdale	13	11
Creemore	21	13	Horning's Mills	17	9
Crosshill	19	17	Huntsville	50	31
Cultus	13	6	Innerkip	17	6
Cumberland	20	5	Ivy	16	5
Dalkeith	14	5	Janetville	8	5
Dashwood	17	9	Jarvis	24	16
Delhi	36	26	Jasper	19	13
Delta	58	19	Jockvale	13	4
Demorestville	23	15	Kars	6	4
Denbigh	6	4	Keene	30	18
Dickinson's Landing	14	7	Keewatin	14	12
Dixon's Corners	31	20	Kenmore	14	7
Dorchester Station	44	34	Killarney	3	2
Douglas	17	8	Kilmaurs	13	8
Drayton	21	13	Kimberley	12	6
Dresden	51	28	King	21	13
Dromore	20	10	Kingsville	35	28
Drumbo	14	8	Kinmount	19	11
Dryden	19	11	Kintail	15	7
Dungannon	24	10	Kirkfield	38	25
Eastview	12	7	Kleinburg	10	5
Easton's Corners	11	6	Lakefield	66	36
Echo Bay	12	7	Lanark	57	28
Edgar	10	7	Lancaster	14	11
Eganville	53	41	Lansdowne	22	11
Elmira	45	31	Latchford	2	.....
Elmvale	50	32	Laurel	13	7
Embro	28	13	Lefroy	25	17
Embrun	4	2	Lemonville	14	6
Emo	12	6	Lion's Head	12	6
Englehart	21	6	Little Britain	18	15
Ennismore	14	12	Little Current	14	10
Erin	54	30	London East	101	77
Exeter	60	34	Lucknow	37	25
Fenelon Falls	39	24	Macdonald Consolidated, Guelph	27	16
Fenwick	9	9	Madawaska	14	9
Feversham	18	9	Magnetawan	10	3
Finch	53	35	Manitowaning	23	15
Fingal	44	27	Manley	1	1
Florence	31	13	Manotick	20	7
Fonthill	18	13	Maple	19	10
Fordwich	19	14	Marmora	18	8
Fort Frances	27	16	Marshville	27	20
Fournier	22	10	Marsville	15	10
Frankford	22	13	Massey	36	13
Galetta	19	11	Matheson	10	1
Glen Allan	18	12	Mattawa	22	12
Gore Bay	36	23	Maxville	26	9
Grand Valley	25	14	Medina	7	3
Haliburton	5	3	Melbourne	24	16
Hall's Bridge	5	1	Merivale	6	6
Hamilton, County Centre	26	19	Merlin	27	16
Hanover	34	18	Merrickville	28	11
Harrington	11	7	Metcalfe	23	7
Harrow	34	19	Mildmay	20	16
Harrowsmith	15	6	Milford	21	11
Hastings	28	14	Millbrook	34	23
Havelock	26	7	Milton	48	26
Hawkestone	20	12	Milverton	59	45
Hensall	23	11	Mimico	40	31

JUNIOR HIGH SCHOOL ENTRANCE EXAMINATION, 1916—Continued

Other Places—Continued	Examined	Passed
Minden	21	8
Minesing	9	5
Moorefield	19	10
Moose Creek	22	14
Mount Albert	30	19
Mount Elgin	17	8
Mount Hope	21	9
Mount Pleasant	22	11
Mount St. Patrick	30	18
Mountain Grove	9	7
Mountain Station	16	9
Navan	23	9
Neustadt	12	7
Newboro	45	15
New Hamburg	26	21
Newington	12	9
New Liskeard	62	28
Niagara Falls, County Centre	22	9
North Augusta	19	7
North Gower	29	14
North Lancaster	24	14
Norwich	37	22
Oakwood	13	9
Odessa	19	9
Oil Springs	52	26
Orono	20	15
Osgoode Station	10	5
Ohsweken	6	2
Otterville	17	11
Paisley	34	24
Pakenham	38	20
Palmerston	30	22
Parry Sound	72	44
Pefferlaw	7	6
Pelee Island	4	2
Pickering	18	13
Plattsville	27	14
Port Burwell	17	9
Port Colborne	37	21
Port Credit	23	13
Port Dalhousie	75	44
Port Stanley	10	7
Powassan	40	21
Priceville	16	8
Princeton	15	7
Queensville	24	16
Rainy River	14	11
Ramsayville	14	9
Randwick	8	3
Richard's Landing	9	3
Richmond	19	7
Ridgeway	31	16
Ripley	32	23
Rockton	28	16
Rockwood	32	22
Rodney	27	20
Rosemont	17	.....
Roseneath	12	7
Russell	43	18
St. George	15	9
St. Helen's	28	15
Sandwich	45	21
Schomberg	28	12
Schreiber	15	7
Scotland	17	7
Selkirk	28	10
Sharbot Lake	23	10
Singhampton	19	10
Sioux Lookout	2	1
Solina	29	14
Southampton	16	10
South Indian	3	3
South Mountain	9	6
South Porcupine	24	5
South River	19	13
Sparta	13	6
Spencerville	21	7
Springfield	21	8
Stayner	36	20
Stevensville	17	8
Steelton	22	18
Stittsville	11	5
Stony Creek	36	25
Stouffville	18	11
Strabane	28	18
Stratton	7	6
Sturgeon Falls	54	28
Sunderland	20	14
Sutton	22	16
Tamworth	27	9
Tara	21	13
Tavistock	19	15
Teeswater	29	16
Thamesford	16	7
Thamesville	46	30
Thedford	16	5
Thessalon	40	21
Thornbury	44	21
Thorndale	25	10
Tilbury	25	19
Tiverton	25	19
Toronto, De La Salle Institute	81	38
Tottenham	40	20
Tweed	57	36
Uptergrove	36	16
Varna	6	3
Vernon	8	4
Verona	37	13
Victoria Harbour	23	17
Vineland	17	11
Wallaceburg	79	47
Warkworth	20	12
Waubaushene	12	11
Webbwood	18	15
Wellandport	9	5
Wellington	23	11
Westboro'	42	24
West Lorne	31	25
Westport	29	9
Wheatley	36	17
White River	14	7
Whitevale	13	8
Wilberforce	20	5
Wilkesport	21	5

JUNIOR HIGH SCHOOL ENTRANCE EXAMINATION, 1916—Concluded

Other Places—Continued	Examined	Passed
Williamsburg	24	14
Willowdale	25	23
Winona	25	22
Wolfe Island	30	12
Woodbridge	17	11
Woodville	37	19
Worthington	8	6
Wroxeter	23	20
Wyoming	26	13
Yarmouth Heights	31	17
Zephyr	18	15
Zurich	11	8
Totals	8,191	4,661

Other Places—Concluded	Examined	Passed
SUMMARY		
Collegiate Institutes	9,119	7,035
High Schools	5,825	3,661
Other Places	8,191	4,661
Grand Totals, 1916	23,135	15,357
Grand Totals, 1915	24,353	17,325
Decreases	1,218	1,968

Number of Candidates obtaining High School Entrance Certificates under the provisions of Circular No. 7 in reference to farm employment

Inspectorate	No. of Certificates	Inspectorate	No. of Certificates
Algoma	7	Manitoulin	7
Brant	29	Middlesex, East	37
Brantford	3	Middlesex, West	21
Bruce, East	2	Norfolk	21
Bruce, West	43	Northumberland, I	12
Carleton, West	23	Northumberland, III	24
Dufferin	20	Ontario, North	3
Dundas	65	Ontario, South	12
Elgin, East	29	Oxford, North	16
Elgin, West	33	Oxford, South	28
Essex	33	Peel	26
Frontenac, North	7	Perth, North	48
Frontenac, South	10	Perth, South	35
Grey, East	31	Peterborough	10
Grey, West	4	Prescott and Russell	12
Halton	27	Renfrew, North	21
Hastings, C	6	Renfrew, South	8
Hastings, N. (Parry Sound)	13	St. Catharines	1
Hastings, South	13	Simcoe, East	11
Huron, East	6	Simcoe, South	15
Huron, West	17	Simcoe, West	24
Kent, East	45	Stormont	5
Kent, West	21	Sudbury District I	1
Kingston	4	Victoria	9
Lambton, East	25	Waterloo, I	4
Lambton, West	23	Waterloo, II	7
Lanark, West	7	Welland	9
Leeds, I	17	Wellington	34
Leeds II	21	Wentworth	16
Leeds III	21	York, West	12
Lennox and Addington	6	York, North	19
London	13		
Haldimand	8	Total admitted	1,140

APPENDIX R

JUNIOR PUBLIC SCHOOL GRADUATION DIPLOMA EXAMINATION, 1916

Centre	Examined	Passed	High School Entrance allowed
Angus	8	5	3
Aurora	6	5	.....
Aylmer	1	1	.....
Bayfield	5	4	1
Blenheim	11	9	1
Bolton	15	11	4
Bracebridge	9	8	1
Brigden	6	6	.....
Burford	1	1	.....
Burk's Falls	3	2	1
Cataraqui	2	1	1
Chatham	1	1	.....
Cobden	11	9	1
Courtright	2	.....	2
Cumberland	8	5	2
Dungannon	11	8	1
Echo Bay	4	4	.....
Elmvale	5	1	4
Emo	4	3	1
Englehart	3	2	1
Exeter	8	7	.....
Fingal	3	2	1
Florence	10	9	1
Fordwich	5	.....	.....
Fort Frances	2	2	.....
Fournier	5	1	2
Galetta	7	5	2
Glencoe	4	3	1
Hall's Bridge	2	1	1
Hensall	5	4	1
Ingersoll	4	3	1
Kincardine	4	3	1
Kingsville	10	6	4
Kinmount	2	2	.....
Kintail	7	6	.....
Lindsay	7	7	.....
Lucan	14	13	1
Magnetawan	5	1	1
Marmora	1	.....	.....
Massey	6	6	.....
Navan	10	9	1
Neustadt	8	7	1
North Bay	6	3	3
Oil Springs	5	4	1
Ottawa	81	65	1
Orillia	10	10	.....
Owen Sound	4	3	1
Parkhill	4	3	1
Parry Sound	6	3	1
Port Dalhousie	2	1	1
Priceville	2	.....	2
Renfrew	13	12	1
Schreiber	9	8	1
Selkirk	4	.....	.....
Simcoe	1	.....	1
Sparta	1	.....	1
Strathroy	8	6	2
Stratton	1	1	.....
Sudbury	6	3	1
Sunderland	4	3	1
Thamesville	12	8	4
Thessalon	1	1	.....
Tiverton	3	2	1
Toronto (Riverdale)	25	8	2
Vankleek Hill	4	1	3
Whitby	2	2	.....
Woodbridge	3	2	1
Woodstock	5	4	1
Wooler	4	2	2
Zephyr	4	3	1
Zurich	3	3	.....
Totals, 1916	478	344	77
Totals, 1915	530	315	115
Increase	.....	29	.....
Decreases	52	.....	38

Number of Candidates entitled to Junior Public School Graduation Diplomas under the provisions of Circular No. 7 in reference to farm employment

Inspectorate	No. of Diplomas
Brant	1
Elgin East	1
Essex	1
Grey East	1
Huron West	3
Kent East	6
Middlesex East	1
Middlesex West	1
Oxford South	2
Peel	2
Prescott	2
Renfrew North	1
Simcoe East	3
York North	1
Total	26

APPENDIX S

AUTUMN MODEL SCHOOLS, 1916

School	Principal	Attendance			Extra-Mural Candidates	Limited Third Class Certificates granted	District Certificates granted	No. failed
		Total	Male	Female				
Clinton ...	C. D. Bouck.....	23	0	23	0	23	0	0
Cornwall .	G. R. Theobald ..	21	1	20	4	24	1	0
Kingston .	W. F. Inman.....	24	4	20	2	26	0	0
Madoc	R. A. A. McConnell.	17	4	13	1	18	0	0
North Bay	A. C. Casselman..	16	0	16	1	14	2	1
Orillia ...	C. L. T. McKenzie.	23	2	21	2	23	1	1
Pt. Arthur	J. H. W. McRoberts	5	1	4	0	5	0	0
Renfrew..	W. McG. Mitchell.	16	2	14	2	16	0	2
Totals.	.....	145	14	131	12	149	4	4

APPENDIX T

LIST OF CERTIFICATES ISSUED BY THE DEPARTMENT OF EDUCATION, 1916.

I. Public School Inspectors

Perney, Frank E., B.A., B.Pæd.
Sullivan, John F., B.A.

II. High School Principals

Althouse, John G., B.A. (Classics.)
Arnold, Hubert G., B.A.
Barrett, Wellington J. C., B.A.
Beck, Clinton G., B.A.
Bissonnette, Florence, B.A.
Bissonnette, Thomas H., M.A.
Browne, Carl S., M.A. (Math. and Phys.)
Bunton, George W., B.A. (Science.)
Cameron, James G., B.A.
Cameron, John Herbert, B.A.
Campbell, George S., B.A. (Maths. and Phys.)
Campbell, William A., B.A.
Challen, Newton E., B.A. (Math.)
Clarke, Bruce W., B.A. (Maths. & Phys.)
Delmage, Edith R., B.A. (Math.)
Ellis, Oscar F. W., B.A.
Evans, George E., B.A. (Classics.)
Farrington, Mabel C., B.A.
Hall, Margaret M. S., B.A.
Haydon, William J., M.A. (Science.)
Kerr, Mrs. Winnabel E., B.A.
Kilpatrick, Jessie S., B.A.
Laing, Maybelle M., B.A.
Lishman, Frederick R., B.A.
Mabee, George E., B.A. (Classics.)
MacKichan, Peter, B.A.
McEachern, John G., B.A. (Eng. & Hist.)
McGill, David H., M.A. (Science.)
McLeod, Florence A., B.A.
McNabb, Finlay, B.A.
McRoberts, J. H. Wilberforce, B.A.
Nesbitt, Mabel E., B.A.
Ogilvie, Alvin I., B.A. (Eng. & Hist.)
Scott, Ethel O., M.A. (Fr. and Ger.)
Shales, Walter E., M.A. (Science.)
Shales, William E., M.A. (Science.)
Shaver, Charles A., B.A.
Shurtleff, William M., B.A. (Commercial.)
Simpson, Robert S., B.A. (Commercial.)
Smith, John C., B.A. (Classics.)
Vrooman, Agnes S., M.A.
Walker, Arthur J., B.A. (Commercial.)
Welsh, David A., B.A.
Whitton, Frederick A., B.A. (Fr. & Ger.)
Zavitz, Arthur S., B.A. (Math.)

III. High School Assistants and Specialists

Adams, Irene S., B.A.
Allen, Lillian M., B.A.
Althouse, John G., B.A. (Phys. Cult.)
Anderson, Franklin A. D.
Atkin, Edith, B.A. (Mods. & Hist.)
Austin, Prudence M.
Bain, Mary, B.A. (Mods. & Hist.)
Baker, Sarah J. (Commercial.)
Ball, Alice I. N., B.A.
Barr, Annie E., B.A. (Mods. & Hist.)
Beaman, Elsie K.
Bell, Edwin T., B.A. (Science.)
Bell, Mary.
Bentley, Annie E., B.A.
Black, Harriet E., B. A. (Fr. & Ger.)
Boyd, Agnes M., B.A.
Broatch, Sarah A.
Cameron, James.
Cameron, J. Herbert, B.A.
Carter, Clara L., M.A.
Cavanagh, Theresa P.
Cayley, Thomas M. (Phys. Cult.)
Challinor, John L.
Chisholm, Renwick J.
Clarke, Lorne H., B.A. (Math. and Phys.) (Phys. Cult.)
Cook, Alta-Lind, B.A. (Mods. & Hist.)
Corbett, Lewis H., M.A. (Mods. & Hist.)
Coulter, Eva M., B.A.
Cragg, Estella R. (Commercial.)
Crawforth, Alma W., B.A.
Daley, Mary M.
Davis, Pearl I., B.A.
Devitt, Samuel G., B.A.
deGuerre, Laura B., B.A. (Fr. & Ger.)
Donnelly, Teresa G.
Douglas, Leila I., B.A. (Fr. & Ger.)
Eaton, Ethel C.
Edwards, Margaret A. (Commercial.)
Finch, Ilma M., B.A.
Fleming, Rita M., B.A. (Math. & Phys.)
Foley, Roy S., B.A.
Fraser, Charles G., M.A. (Science.)
Fraser, Mary A., B.A.
Gilfillan, Viola, B.A.
Gilroy, Emily I., B.A.
Graham, Anna F.
Grills, Margaret.
Gulston, Charles S.
Hall, Henry W.
Hamer, Lottie E., B.A. (Mods. & Hist.) (Phys. Cult.)
Hamilton, Agnes I.
Henry, V. Roland, M.A. (Science.)
Holmes, Margaret, B.A.
Hone, Arthur D., B.A. (Science.)

III. High School Assistants and Specialists—Con.

Howie, Mabel F.
Hughes, Hugh L.
Irwin, Norman A., B.A. (Phys. Cult.)
Jenner, Madeline M., B.A. (Phys. Cult.)
Kilty, Ruby I.
King, Eva W., B.A.
Kirk, Gladys R.
Latour, Charles A., B.A.
Locklin, Elva J., B.A.
Lott, Edith A.
Maher, Margaret.
Marshall, Marcella T. (Commercial.)
Martin, William H., B.A. (Science.)
Mazinke, Henrietta E.
Menzies, Leslie P., B.A. (Science.)
Millard, Lena.
Mitchell, Lillian G.
Moynihan, Mayme H.
Macdonald, Frederick J., M.A. (Math. & Phys.)
MacIntyre, Lillian.
McClellan, John.
McCrimmon, Leon R., M.A.
McDonald, Evelyn, M.A.
McGregor, Helen J.
McKinley, Clara B., B.A. (Classics.)
McMillan, Roy J.
Nugent, Eleanor, B.A. (Fr. & Ger.)
O'Connell, Marguerite E., B.A. (Fr. & Ger.)
Oldham, Ida M., B.A.
Otto, George S., B.A. (Mods. & Hist.)
Peck, Maud M.
Poirier, Mary H.
Pridham, Clara I. (Commercial.)
Quail, May F., B.A. (Fr. & Ger.)
Readdie, George, M.A. (Fr. & Ger.)
Redmond, Edith J., B.A.
Reid, Hazel I., B.A.
Reynolds, Myrtle V., B.A.
Rice, Elsie M.
Ross, Margaret E.
Ross, Margery E., B.A. (Mods. & Hist.)
Russell, John W., M.A. (Math.)
Ryerson, Catherine G. S., M.A.
Sailsbury, Orethia M.
Shales, Walter E., M.A. (Phys. Cult.)
Shales, William E., M.A. (Phys. Cult)
Smith, Donald G.
Smith, Hilda C. H., B.A.
Spence, Ruth E., B.A.
Squire, William J. (Commercial.)
Staples, Edna E.
Stewart, James H.
Taylor, Annie M. A., B.A. (Phys. Cult.)
Thomas, Neil J. (Art.)
Tiplady, Evelyn C. (Commercial.)
Tobin, Lilly S., B.A.
Train, Florence B., B.A. (Math. & Phys.)
Turvey, Ina M.
vonGunten, Clarice L., B.A.
Walker, Anson R.
Warnock, Grace I.
Weatherill, Helen E. M. (Commercial.)
Webster, Leah.
White, Margaret E.
Whitton, Lillis P., B.A. (Fr. & Ger.)
Wilker, Milton J.
Wilson, Mrs. Arletta. (Art.)
Zuern, Maude E., B.A. (Classics.)

IV. Permanent Elementary Certificates

Challen, Newton E., B.A. (Phys. Cult.)
Clarke, Eleanor L., B.A. (Art.) (Phys. Cult.)
Eaton, Ethel C. (Art.)
Fleming, Jean H. (Art.)
Fraser, Lulu B. (Phys. Cult.)
Harris, L. Morwenna. (Art.)
Hicks, Thomas J., B.A. (Phys. Cult.)
Johnston, Hally, B.A. (Art.)
Millard, Lena. (Art.)
Robinson, Sadie. (Art.)
Ross, Margaret E. (Art.)
White, Mabel R. (Phys. Cult.)
Wickett, Laura E. (Art.)
Willson, Blanche H., B.A. (Phys. Cult.)

V. Permanent Supervisors in Vocal Music

Rees, Llewellyn.
Spence, Mrs. Carrie R.
Tedd, Nellie E.

VI. Permanent Intermediate Certificate in Agriculture and Horticulture

Gulston, Charles S.

VII. Permanent First Class Certificates

Anderson, Corinne, B.A.
Adams, Ada.
Annable, Nellie O.
Agar, Shirlie V.
Belyea, Emma B.
Buchanan, Vera F.
Ballard, Maxwell R., B.A.
Booker, Alice K.
Benger, Irene, B.A.
Beyer, Grace I.
Brisson, Albertine J.
Brown, David D.
Barnby, Vera E.
Benn, Ruth B.
Bryant, Joyce.
Beattie, Phyllis M.
Benness, Helen S.
Bruce, Hilda P.
Carter, George W., B.A.
Charles, Frederick, B.A.
Coleman, Kathleen (Sr. M. Cyril).
Cole, Margery K.
Charteris, Gwendoline I.

VII. Permanent First Class Certificates—Con.

Cameron, Andrew G.
Clemens, Grace A.
Campbell, Gladys G.
Cody, Elizabeth L.
Crosthwaite, Nellie.
Cowan, Wilfrid.
Condie, Bessie.
Crate, Della F.
Cleland, Margaret O.
Connor, Carl Y., B.A.
Chantler, Annie I.
Cochrane, Grace H.
Dyment, Ila P.
Damude, Edgar H.
Dee, Austin A., B.A. (Br. Austin).
Dore, Harry C.
DeFoe, Eugenie M., B.A.
Drew, Margaret W.
Dickinson, Olive.
Dawson, Viola M.
Duff, Elizabeth A.
Depew, Verna V.
Dudley, Pauline.
Elliott, Arthur H.
Emmerson, Edna.
Foley, Roy S., B.A.
Fleming, Eva.
Foster, Ishbel A.
Finlayson, Roderick A.
Forfar, Agnes B.
Gray, Willa A.
Graham, Iva P.
Gilchrist, John, B.A.
Gliddon, Mildred E.
Greer, Laura E.
Hutton, Sarah P.
Hanahoe, Margaret, B.A. (Sister M. Mildred.)
Hunter, Florence E.
Halliday, Clarence P.
Haugh, Cassie.
Hinchley, John M.
Howlett, Charlotte.
Huffman, Gertrude E.
Houser, Evelyn G.
Husband, Edith P., B.A.
Hunter, Rilla, B.A.
Henderson, Stanley.
Holmes, Clela P.
Irving, Maude G. N., B.A.
Ingoldsby, T. Gordon.
Johnston, Mabel C.
Johnston, Emily C., B.A. (Sister M. Josephine.)
Joyce, Walter, B.A.
Johnston, William B., B.A.
Jarvis, Charles R.
Jordan, John C.
Jones, Charles D.
Job, Mabel D.
Johnston, Catharine A.
Johnston, Essie G.
Kenney, Hazel I., B.A.
Kincade, Myrtle B.
Kennedy, Elizabeth. (Sr. St. Florina.)
Kerruish, Hubert B.
Leslie, William B.
Lake, Ethel M., B.A.
Lamont, Alexander D., B.A.
Lee, Sadie, B.A.
Lavis, Grant F.
Lawrence, Zella J.
Lynch, Anastasia E.
Linklater, Ernest W.
Lyle, Laura M.
McHardy, Ada M.
McLachlan, Donald C.
McKnight, Mary G., B.A.
McKillop, Jessie.
McKenzie, Elsie M.
McDonald, Kate M., M.A.
MacDougall, Jean T.
Mather, Leona E.
Maloney, Mary F. (Sr. M. Joseph.)
Millar, Annie B., B.A.
Miller, Gladys M.
Marwick, Bruce D.
Miller, Florence I.
Morgan, Irene V.
Mooney, Jessie M.
Morgan, Susan P.
Maxwell, Mabel I., B.A.
Marshall, Hazel J.
Manning, Kathleen.
Noble, William H.
Newton, Sara E.
Page, Jennie, B.A.
Pomeroy, Gertrude, B.A.
Partridge, James A.
Purvis, Olive J.
Paton, Julia R.
Petrimoulx, Lorette M.
Phillips, Lillian M.
Paton, William D.
Quinn, Francis J., B.A.
Rorke, Luella M.
Russell, Flossie L.
Roberts, Irene F.
Reid, Gladys M.
Stapleford, Ethel M., B.A.
Short, John A.
Simpson, John G., B.A.
Smith, Wallace W., B.A.
Stewart, Esther L.
Sinclair, Amanda K.
Smyth, Annie F.
Stapleton, Louis J.
Swinton, Kathleen A.
Stewart, Jennie.
Stewart, Annie V.
Steinhoff, Ethel.
Strickland, Valeria.
Speight, Amy G.
Speight, Florence M.
Thrasher, Albert E.
Traver, Lillie A., B.A.
Thomson, Thomas M.
Trewin, Robert F.
Tolhurst, Evelyn W.
Upper, Marion.
Wood, Harold B.
West, Randolph H. A.
Wheable, Geoffrey A.
Wilson, Dorothy, B.A.
Wilson, James J., B.A.
Watson, Marion.
Warnica, Margaret.
Witton, Agnes P.
Waring, Arthur W.
Whitelaw, Charles M.
Woodcock, Mary S.
Wismer, Ella M.
Wood, Mrs. Effie.
Ward, Wilmyr G.

VIII. Permanent Second Class Certificates

Aitchison, Florence I.
Agla, Evalena J.
Allison, Verna C.
Ansley, Mary A.
Atkinson, Vera A.
Aitken, Christena.
Albright, Helen J.
Arnott, Jessie.
Anderson, Janet C.
Anderson, Lizzie M.
Anderson, Lucinda A.
Arthur, Dora M.
Anderson, Clarence W.
Asling, Evelyn V.
Atmore, Hazel M.
Atkinson, Hazel.
Andrews, Harry W.
Allan, Beatrice.
Armstrong, Gertrude H.
Arthurs, Ella.
Aikenhead, Jessie M.
Armstrong, Alice M.
Aiken, Alexander W.
Armour, Jean L.
Arnold, Sylvia G.
Anderson, Annie M.
Anderson, Katherine S.
Armstrong, Ethel M.
Austin, Elsie.
Anguish, Hazel.
Aiken, Edith A.
Anderson, Erma A. E.
Agar, Luella M.
Addleton, Emma E.
Avery, Florence R.
Anglin, Mabel E.
Atkinson, Mrs. Helen.
Armstrong, Olla B.
Burgess, Mamie E.
Barlow, Marion D.
Bailey, Frederic M.
Burton, Edith E.

VIII. Permanent Second Class Certificates—Con.

Black, Ursula M.
Baldwin, Bernard C.
Barrett, Nina M.
Binnie, Clara G.
Bonham, Robert L.
Barrett, Mary E.
Budden, Grace S.
Benson, John H.
Brown, Mary E.
Bandeen, Edith M.
Bessey, Jennie G.
Boyce, Mabel.
Burgess, Myrtle E.
Burkholder, Bertha E.
Burrows, Marjorie.
Brown, Annie.
Boland, Margaret M.
Byrnes, Charles F.
Baird, Margaret S.
Bradley, Jessie M.
Brown, Eliza J.
Brownell, Clara M.
Burns, Kathleen.
Ballantyne, Maria A.
Blyth, Elspeth.
Bryans, Frank.
Burritt, Enna L.
Blair, Sybil E.
Bruce, Thelma N.
Boyd, Susie L.
Bradley, Laura W.
Brown, Reta C.
Brokenshire, Florence A.
Brown, Mary E.
Byce, Elizabeth.
Burnham, Roma A.
Bricker, Clara.
Brownrigg, Gertrude.
Beauchamp, Olive O.
Butler, Peter P.
Boyd, Alberta M.
Barnett, Mary E.
Boyle, Susan K.
Burke, Clara I.
Blackwell, Phœbe A.
Busswell, Floretta L. R.
Bruxer, Agnes M. (Sr. M. Bertrand.)
Ball, Clara O.
Blott, Hilda A.
Beauchamp, Marie L.
Benner, Alvin R.
Blowes, Florence H.
Bondy, Hattie.
Brownrigg, Alice T.
Bissell, Marion.
Brinkman, M. Vida.
Bricker, Harold.
Bowman, Hilda.
Barton, Mamie E.
Bryan, Lenna.
Beaman, Velma J.
Burgess, Leila P.
Blanch, Naomi.
Beckett, Rhoda J.
Baldwin, Helen G.

Bristol, Ruth A.
Bierworth, Laura.
Ballage, Rose C. (Sr. Euphrasia.)
Brothers, Muriel.
Bradley, Elva S.
Boyd, Perley S.
Barnes, Eva M.
Bloomfield, Eva M.
Ballagh, Mabelle W.
Breen, Thomas J.
Beseau, Mary.
Brown, Jennie B.
Bower, Effie M.
Bate, Mary A.
Bell, Vera.
Baxendale, Gladys.
Blair, Clara E.
Bravin, Louisa J.
Bryant, Nettie.
Bunner, Gladys L.
Bankes, Evelyn E.
Briggs, Annie M.
Cluff, Jennie E.
Copeland, Carrie L.
Clark, Henrietta E.
Cooke, Eva A.
Connery, Jennie.
Campbell, John M.
Clark, Laura E.
Corliss, Mrs. Estella.
Caldwell, Hannah M.
Chittick, Lillian C.
Cameron, Eva C.
Calder, Ethel M.
Clark, Greta M.
Campbell, Teresa A.
Carmody, Margaret.
Casselman, Ella C.
Case, Edna E.
Conn, Marygold.
Caldwell, Cecilia M.
Cassidy, Ethelreda E.
Chown, Myrtle E.
Christy, Edith L.
Curran, Annie C.
Carman, Ina A.
Cheer, Grace M.
Campbell, Dorothy M.
Curry, Helena G.
Currie, Violet O.
Campbell, Hattie G.
Coté, Eileen.
Craig, Nora H.
Cusick, Winnifred.
Connell, Susie W.
Carr, Harriett E.
Cameron, Pearl A.
Crawford, Charlotte R.
Coburn, Clara E.
Capel, John.
Cooper, Lillian A.
Clark, Annie E.
Carroll, Florence.
Craig, Nellie.
Couch, Emma L.

Campbell, Kate W.
Collinson, Sarah E.
Cosgrove, Annie.
Clarke, Mamie.
Coleman, Mary.
Coughlin, Mary A.
Case, Ethel C.
Cummins, Bridget H.
Curtin, Mary J.
Carr, Christina.
Collins, Maud M.
Campbell, Hazel S.
Chalmers, Grace A.
Clarke, F. Jeanette.
Cowan, Christina P.
Capling, Florence H.
Cook, Charles E.
Crone, Hazel.
Cameron, Effie.
Carruthers, Ethel M.
Campbell, Marion J.
Cassie, Mabel E.
Culver, Eva H.
Cole, Ethel G.
Clunas, Roy E.
Carrick, Willa.
Campbell, Ruth M.
Clark, Lenore.
Casserly, Mae. (Sr. Gerarda.)
Crobar, Charles M.
Clunas, Frances L.
Clark, Florence J.
Coulthard, Blanche.
Crozier, Bessie.
Cameron, Mary M.
Connolly, Ellen C. (Sr. M. Clotilde.)
Comfort, Clementia.
Coulthart, Myrtle A.
Crawford, Edwin R.
Cooper, Annie.
Crosbie, Mary.
Corrigall, Clyde B.
Collins, Reta.
Currie, Eva R.
Cass, Mabel I.
Campbell, Belle M.
Campbell, Blanche L.
Courtis, Madeline E.
Cook, Nora D.
Dusten, Eva B.
Derry, Gertrude L.
Drummond, Isabel A.
Dunn, Rose.
Dingle, Della.
Dillabough, Ray C.
Draper, Myrtle I.
Driscoll, Mary O.
Dewey, Maybelle C.
Deneau, Nina M.
Devine, Margaret M.
Duff, Kathleen.
Daly, Anastasia M.
Daly, Florence M.
Day, Mary A.
Dwyer, James F.

VIII. Permanent Second Class Certificates—Con.

Dearborn, Fred. H.
Dorman, Mabel E.
Dukelow, Samuel O.
Davis, Isabella E.
Dalton, Leta H.
Dickson, Christina F.
Dunlop, Mildred N.
Diehl, Florence M.
Dalton, Mary J.
Deamude, Frank V.
Dewar, Jean.
De Rochie, Nora K.
Douglas, Hazel A.
Durward, Margaret.
Dwyer, Catherine A.
Davidson, C. Marie.
Doughty, Clara M.
Day, Mary W.
Dixon, Mrs. Margaret C.
Donovan, Clara E.
Dunston, Annie J.
Dohn, Florence W.
Davey, Lulu E.
Duggan, Felicitas A. (Sr. M. Constantia.)
Dunlop, Isobel C.
Dowling, Mabel A.
Donoho, Winnifred K.
Duff, Theresa M.
Davison, Emma J.
Dunlop, Beatrice M.
Dowswell, Lillian R.
Dunnington, Mary O.
Duncan, Grace A.
Driscoll, Margaret A.
Doyle, Josephine G.
Devlin, Verna W.
Durocher, Marguerite E.
Donnelly, Mary L.
Daniels, Nora.
Ellis, Ola J.
Eedy, Marion W.
Edmeston, Rhoda C.
Early, Mary L.
Ewing, Ernest H.
Ellison, Eva J.
Elliott, Rose E.
Enright, Loretta.
Eadie, Florence P.
Emmott, J. Caroline.
Evans, Bessie.
Elliott, Winnie M. B.
Elliott, Helen F.
Ellwood, Mary.
Eckmier, Vera F.
England, Bertha.
Edgar, Lillian J.
Ellison, Lila A.
Eidt, Ruby L.
Edmison, Helen M.
Edgar, Mary O.
Eley, Elizabeth C.
Feir, Mary E.
Futcher, Jessie N.
Freure, Annie.
Freure, Katie J.
Fleming, Jessie.
Fennell, Vina.
Ferguson, Jessie B.
Fitzgerald, Josephine.
Fleming, Mary S.
Fry, Valerie D.
Fletcher, Janet I.
Forbes, Cora E.
Feeney, Margaret J.
Faris, Annette.
Fletcher, Ada.
Foster, F. Josie.
Freeman, Cecil E. C.
Fowler, Ethelyn G.
Fraser, Margaret J.
Featherson, Norene H.
Ferguson, Mary I.
Flanagan, Mary E.
Ferguson, Annie M.
Freeland, Eunice C.
Fuller, Margaret L.
Farquharson, Isabelle A.
Farr, Ada D.
Finleon, James M.
Fair, Wanda M.
Featherstone, Tillie M.
Farrow, Ruby A.
Finnerty, Ethel L.
Fitzmaurice, Margaret. (Sr M. of the Angels.)
Fletcher, Mary E.
Foran, Mary K.
Fennell, Marjorie A.
Fritsch, Elsa C.
Fieldhouse, Hazel M.
Fewster, Edna L.
Fry, Frances J.
FitzPatrick, Rita H.
Finnie, Marjorie S.
Gardiner, Marguerite.
Gregg, Lillian M.
Gould, Elizabeth M.
Greenway, Emma E.
Gaiser, Mildred K.
Glanfield, Almeda.
Grant, Mayme E.
Grunig, Godfrey J.
Gunter, Clara E.
Grady, Frances.
Grant, Christie H.
Grant, Evelyn H.
Groves, Mamie E.
Galvin, Verna M.
Guillet, Muriel F.
Garrett, Florence.
Green, Ethel M.
Greer, George H.
Godfrey, Everett K.
Garvey, Annie.
Genge, Kathleen C.
Given, Agnes M.
Galloway, William H.
Garnham, Lena I.
Gillard, Winnie.
Grattan, Josephine C.
Goetz, Lily R.
Gillies, Tena.
Grant, William H.
Gibson, Irene. (Sr. M. Francis.)
Gowan, Bella J.
Grant, Laura A.
Graham, Anna B.
Grenzebach, Ruth E.
Gillespie, Lyla.
Griffin, Harvey.
Gray, Florence H.
Gemmel, Jessie G.
Gilbert, Norma.
Grier, Mary E.
Graham, Jessie I.
Green, Annie M.
Gaskins, Emma A.
Graham, Miriam E.
Grylls, Eugenie A.
Groh, Mary E.
Goudie, Alice L.
Greene, Patrick L.
Girdwood, Edna V.
Gilbertson, I. May.
Guest, Duncan M.
Gee, Elizabeth L.
Gayfer, Lillian E.
Gibson, Maude.
Gemeroy, George A.
Gray, Olive B.
Glenn, Laura E.
Golden, M. Mildred.
Greeney, Alma G.
Green, Beatrice M.
Goldberg, Rosa A.
Graham, Edna M.
Hague, Marvel A.
Harrington, Ethel M.
Hunt, May.
Hill, Agnes M.
Hall, Ada T.
Hackett, Mary.
Hemstreet, Anna L.
Hayman, Vera L.
Hanna, Anna P.
Hartmier, Adam L.
Hillis, James F.
Hodgson, Isabella S.
Holmes, Laura E.
Harrison, Florence A.
Hogan, Julia A. (Sr. M. Calista.)
Hodgins, Mabel I.
Hawkes, Florence M.
Hazell, Elsie A.
Henry, John A.
Howieson, Katherine C.
Hunt, Laura E.
Hurd, Hazel V.
Harrison, Eva.
Hough, Florence M.
Hill, Clara A.
Hambly, Elsie W.
Hogg, Allan G.
Hodgins, Ethel M.
Harrison, Mary B.

VIII. Permanent Second Class Certificates—Con.

Herbert, Eleanor.
Hart, Leslie M.
Houle, Ida E.
Hawkins, Anna L.
Hart, Bruce.
Hislop, Margaret G.
Hawkins, Margaret H.
Harris, Myrtle V.
Hartmier, Mina C.
Haig, Marjorie J.
Hicks, Hazel M.
Hanley, Jennie M.
Hyland, Mabel R.
Herron, Edna M.
Hunter, William L.
Haverson, Catherine A.
Haygarth, Mrs. Fannie C.
Hutton, Muriel M.
Hutchinson, Constance M.
Hedley, Mabel R.
Holmes, Lily S.
Harcourt, Theresa E.
Harris, Cora P.
Harman, Evelyn.
Horan, Margaret A.
Henry, Margaret J.
Hodd, Edith M.
Haylock, Fred. T.
Harrison, Bessie M.
Hobbs, Violet A.
Hankinson, Winnifred.
Henry, Gertrude M.
Hurlburt, Hazel R.
Harris, Helen J.
Hawley, Lucille M.
Hild, Anna.
Harkness, Jessie M.
Ianson, Floyd H.
Irvine, Mabel E.
Irvine, May A.
Jackson, Florence L.
Jackson, Ethel R.
Jardine, Mary R.
Johnston, Elsie M.
Johnston, Florence E. C.
Jones, Dora A.
James, Irene M.
Jones, Charles L.
James, Ethel F.
Johnston, Edith M.
Johnston, Lillie L.
Jamieson, Inez.
James, Muriel H.
Johnston, Myrtle E.
Johnston, John H.
Johnston, Olga I.
Kappele, Marjorie M.
Knox, Frank A.
Keith, Helen M.
Kennedy, Clare V. F.
Koehler, Ada L.
Kyle, Olga B.
Keenan, Mary (Sister Lucy).
Kerr, M. Audrey.
Keith, Gladys.
Kelley, Mary A.
Kennedy, Loretto.
Kirby, Frances I.
Kienzle, Della E.
Kratz, Edith.
Kingsborough, Dora.
Kyle, Wilha R.
Kelly, Mary T.
Knight, Ella H.
Kelly, Cora M.
Kelly, Mary M.
Kennedy, Gertrude (Sr. M. Jovita).
Kirke, Stella P.
Kavanagh, Camilla P.
Kemp, Edith M.
Knapp, Luella G.
Kilgour, Mary A.
Keeling, Gladys M.
Kerr, Ina M.
Kennedy, Ethel M.
Knowles, Irene M.
Kingston, Kathleen.
Kinnear, Charles H.
Kilfoyle, Lila W.
Knowles, Doris L.
Kelly, John E.
Kopp, Marion H.
Kerfoot, Hazel.
Kayler, Marion G.
Knight, Annie I.
Kingston, Verda M.
Langmaid, Russell I.
Locke, Arlie P.
Learn, Orpha E.
Limage, Jessie M.
Laird, Jean E.
Leith, Helen M.
Luton, Alberta.
Lane, Dorothy.
Langdon, Ida L.
Langford, May F.
Lavis, Edna E.
Le May, Clara.
Longfield, Pearl G.
Leckie, Tessie.
Lunney, Margaret A.
Lynch, Katie.
Leitch, Jennie E.
Levy, Richard W.
Ludlow, Vera M.
Law, Irene V.
Longfield, Ethel L.
Langan, Cecilia (Sr. M. Gonzaga).
Lyon, Edna M.
Lowry, Hazel M.
Logan, Reta M.
Lochhead, Annie C.
Leslie, Ina.
Little, Hannah J.
Lennox, Margaret J.
Latimer, Mary E.
Leeds, Albert L.
Laird, Gertrude E.
Lackie, Loretto (Sr. St. Feresita).
Locke, Ada G.
Leitch, Peter W.
Moyer, Mary E.
Munro, Florence A. S.
Morton, Laura K.
Macklin, Lois I.
Moore, Edith L.
Marsh, Annette.
Miller, Gladys J.
Moore, Ella I.
Mackell, Anna C.
Matheson, Jessie M.
Mitchell, Mrs. Alma G.
Maitland, Mildred K.
Maloney, Anna M.
Manders, Edna M.
Mayhew, Edna M.
Morris, Ruby A.
Murphy, Nellie M.
Martin, Marguerite L.
Muir, Pearl.
Murray, Annie M.
Moffat, Nettie G.
Madden, Maude R.
Mutton, Nellie G.
Munroe, Helen A.
Morrow, Edna L.
Myers, Annetta.
Murphy, Irene M.
Mabbott, Jessie M.
Morgan, Margaret E.
Miller, Mildred H.
Marshall, Harold C.
Maus, Estella M.
Mills, Sylvia.
Meggs, Addie.
Marshall, Ida.
Moore, Hazel M.
Minor, Winnifred.
Madill, Bessie.
Mathewson, Ruby E.
Murray, Mabel I.
Mitchell, Christena K.
Moss, Eleanor A.
Murphy, Annie E.
Mihell, Mildred.
Mallett, Edna E.
Moulton, Bertha M.
Morgan, Manning E.
Mair, Hannah G.
Matheson, Isabella E.
Marcellus, Ina D.
Marsh, Olive M.
Maley, Eva P.
Marsh, Ada B.
Martin, Mabel G.
Maguire, Evelyn E.
Middleboro, Mabel.
Muter, Marie E.
Martin, Mary M.
Mallory, Frank L.
Male, Helena L.
Mason, Agnes R.
Marshall, John B.
Morton, Rena V.
Monkmon, Lawrie M.

VIII. Permanent Second Class Certificates—Con.

Munroe, Edith M.
Milne, Cherry M.
Magee, Marion I.
Macklin, Jessie R.
Morrison, Gertrude E.
Morrison, Kathleen E.
Milroy, Ella.
MacLeod, Jeanette.
Mactaggart, Margaret E.
MacGregor, Jean S.
MacLachlan, Bessie.
MacLaurin, Sara E.
MacDonald, Kate H.
MacPherson, Annie M.
MacArthur, Isabella A.
MacDonald, Annie A.
MacMillen, Ellen M.
MacKenzie, Helena I.
MacDougall, Catharine J.
MacPherson, Edna.
MacGregor, Edna C.
MacIntyre, Hugh B.
MacDonald, Annie F.
MacDonell, Gwendolen.
MacGregor, Florence M.
MacDonald, Christina K.
MacLennan, Donalda E.
MacNaughton, Jennie C.
MacLeod, W. Donald.
MacMillan, Effie.
McIntyre, Annie.
McPhaden, Ruth M.
McKay, Catherine L.
McKinley, Mattie F.
McDonald, Catherine E.
McGillivray, Ruby J.
McHardy, Ethel G.
McMane, Mrs. Ruth K.
McCann, Mabel A.
McCann, Mariana E.
McGregor, Jessie M.
McIlraith, Jessie M.
McIntosh, Mabel.
McMahon, Catherine A.
McNab, Ruth.
McConnell, Adelyne A.
McKay, Muriel.
McKenzie, Christene P.
McLaughlin, Martha (Sr. M. Zeta).
McCallum, Percy P.
McConnell, Ella G.
McConnell, Ethel B.
McGregor, Ruth.
McIntyre, Lilian.
McLennan, Florence.
McCammon, Edith G.
McNamara, Teresa.
McBride, Maida.
McDonald, Annie L.
McDowell, Minnie R.
McLeod, Mary.
McQuarrie, Ethel M.
McNab, Irene L.
McKinnon, Margaret.
McRae, Christena.
McKnight, Leila M.
McKenna, Everilda.
McGwan, Nora M.
McBratney, Ruby.
McBride, Lilian V.
McCracken, Mary W.
McRae, Martha.
McTavish, Jessie M.
McLachlan, Glady E.
McCulloch, Margaret E.
McDougald, Lillias.
McTavish, E. Lylas.
McArthur, Ella.
McCallum, Edna.
McClure, Jane C.
McBride, Mary B.
McGregor, Basil A.
McNeil, Margaret L.
McDonald, Hattie C.
McLeod, Martha R.
McLay, Anna B.
McKay, Mary E.
McAlister, Mary K.
McDermid, Grace E.
McMulkin, Marion.
McFeetors, Eva.
McKay, Annie M.
McCort, Nellie L.
McGill, Esme A.
McMurray, Mrs. Margaret I.
McKenzie, Margaret M.
McEachern, Lily F.
McKay, Florence J.
Nurse, Hazel A.
Nolan, Rose (Sr. M. of Nazareth).
Nicholson, Hildred E.
Nesbitt, W. Lloyd.
Nairn, Mary E. B.
Newman, Olive T.
Nelson, Bessie.
Nolan, Florence C.
Nelson, Lillian R.
Noble, Margaret G. N.
Nicolson, William J.
Neilson, Annie E.
Nicholson, Irene A.
Niebergall, Stanley S.
Nichols, Jeanette M.
Norton, Tessie I.
Nichols, Belle.
Neilson, Mary S.
O'Reilly, May E.
Ovens, Gertrude M.
O'Neill, Kathleen.
O'Boyle, Mary C.
Osborne, Minnie V.
Oestreicher, Milton D.
O'Boyle, Marguerite.
Oswald, Tena E.
O'Brien, Mary J. E.
O'Boyle, Aileen R.
O'Reilly, Edward A.
O'Neill, Jean M.
Price, Carrie A.
Paterson, Emily M.
Procunier, May V.
Pollard, Jacob H.
Preston, Sarah.
Proud, Mabel.
Perras, Rosa (Sr. Joseph Albert).
Porteous, Bella A.
Phinn, Dora E.
Perkin, Nellie M.
Perkins, Gladys S.
Porter, Eva A.
Paterson, Elsie P.
Payne, Myrtle J.
Pescod, Ethel M.
Patterson, Helen.
Pinfold, Ruby.
Patten, Bessie M. (Sr. M. Beatrice).
Porter, Lena K.
Prueter, Wanda L.
Pfohl, Edith M.
Powell, Evelyn.
Prittie, Helen M.
Phillips, Birdie.
Prentice, Laura A.
Price, Carrie E.
Pepper, Mary A.
Peake, Fred D.
Paton, Mary E.
Powell, Mrs. Beatrice A.
Perkins, Hilda E.
Pettit, Lois V.
Pringle, Annie L.
Papineau, Pearl C.
Pulling, Katie E.
Platten, Mrs. A. Irene.
Phillips, Margaret F. (Sr. M. St. James).
Parkhouse, Rosina M.
Peace, Clara L.
Pilcher, Rhoda.
Porter, Bertha J.
Patterson, Nellie A.
Peters, Amy E.
Paton, Katherine A.
Paton, Irene H.
Parkes, Edna L.
Quinlan, Annie.
Quig, Annie H.
Reycraft, Myrtle L.
Ross, Gladys D.
Ryan, May A.
Rose, Edna G.
Richmond, Winnifred.
Rush, Flossie E.
Ryan, Mary A. (Sr. St. Gertrude).
Roberison, Ella C.
Robeson, Eva V.
Rombough, Mrs. Ada M.
Rothwell, Susie.
Ritchie, Emma M.
Rutherford, Martha A.
Ross, Mamie.
Rice, Elizabeth H.
Reeves, Mary A.

VIII. Permanent Second Class Certificates—Con.

Ryan, Winnie M.
Rockwell, Annie L.
Ramsay, Catharine F. P.
Robertson, Eva M.
Reece, Ellen E.
Randles, Minnie L.
Rush, Florence J.
Roberts, Helen.
Rupert, Lily M.
Reeves, Helen B.
Ramsay, Olive C.
Rosebrugh, Marjorie.
Ruttle, Elgin A.
Rowe, Leola F.
Reycraft, Alma L.
Roberts, Lucile M.
Robinson, Emma M.
Robb, Jessie B.
Reinke, Clara A.
Robinson, Vera M.
Redden, Hattie E.
Ruthig, W. Alfred.
Ray, Peter J.
Rodwell, Bertha A.
Robinson, Elsie O.
Riddell, Robert A.
Rutherford, Flossie M.
Rounding, Estella.
Reed, Mae S.
Rathvon, Gordon.
Ralston, Ruth I.
Smith, Katie R.
Scott, Jessie R.
Scott, Bernice E.
Skales, Ruth E.
Stevenson, Annie G.
Sexsmith, Royal L.
Smyth, Nora E.
Smith, Elsie C.
Scott, Lila K.
Shipsides, Ida B.
Stephens, Sydney J.
Steele Gladys W.
Stockwell, Irene A., B.A.
Sheppy, Beulah.
Sherriff, Mary.
Sherritt, Minnie E.
Smith, Myra H.
St. Denis, Mary L.
Stetler, Grace M.
Stuart, Olive M.
Scott, Ernest G.
Short, Isabel A.
Shier, Susan V.
Smyth, Jessie L.
Stewart, Catherine I.
Staley, Eileen A. M.
Stanley, Sadie E.
Sullivan, Frankie M.
Shepherd, Fred. B. R.
Stewart, Mary A.
Sullivan, Elizabeth.
Stonehouse, Iva R.
Smith, Mrs. Ethel W.
Staley, Nora.
Switzer, Bertha.
Smith, Mary L.
Singleton, Helena.
Swinton, Zephy I.
Sterling, Clara M.
Shipley, Belle.
Sellens, Reta E.
Swick, Anna E.
Symons, Clara M.
Shields, Alice A.
Sawdon, Herbert H.
Smith, Irene.
Squire, Estella H.
Staples, Mary J.
Stinson, Eveleene M.
Scholey, Elsie M.
Shier, Susie C.
Sonley, Elma M.
Strongman, Gladys I.
Schurter, Valentine J.
Shute, Sarah M.
Sandison, John D.
Speck, Gladys M.
Shannon, Genevieve.
Snure, Marie E.
Sabiston, Jessie E.
Scott, Bernice E.
Switzer, Harriett G.
Stokes, Milton L.
Slatcher, Myrtle H.
Scarland, Ethel M.
Styles, George G.
Shannon, Lea M. N. A.
Scott, Lillian E.
Springett, Bertha.
Stewart, Louisa M.
Sinclair, Annie S.
Sheperdson, Margaret A.
Silver, Alma M.
Stewart, Annetta C.
Schram, Bessie M.
Stephens, Georgina.
Skeoch, Mary E.
Smith, Genevieve.
Stothers, Ethel J.
Scholes, Jennie E., B.A.
Strader, Eva M.
Schenck, Edith V.
Shearer, Letitia.
Sheppard, Iva V.
Smith, Gladys E.
See, Mildred M.
Sherlock, Clare I.
Safford, Hazel D.
Smith, Nellie M.
Staples, Berta M.
Swartz, Mary.
Stout, Agnes.
Sullivan, Eileen.
Smith, Abbie E.
Street, Marguerite A. (Sr. M. Thérèse).
Sloman, Wilbert G.
Shrier, Emerson N.
Symington, Mary M.
Sovereign, Nellie F.
Townsend, Ethelyn M.
Twiss, Norma M.
Twiss, Edward O.
Turner, Edna M.
Tolman, Sarah H.
Taylor, Ida H. A.
Tew, Lorene M.
Townsend, Margaret L
Turnbull, Margaret I.
Turnbull, Ethel G.
Tuffy, Aurelia.
Terry, Anna L.
Thomson, Ethel.
Thornbury, Gertrude.
Taylor, Cecilia A.
Thistlethwaite, Beatrice B.
Thompson, Muriel C.
Thomson, Jean V.
Taylor, Hazel E.
Touchburn, Florence.
Taylor, Blanche A.
Turner, Marjorie J.
Thorne, Eva M.
Thompson, Jessie G.
Thompson, Gladys N.
Topping, Reta L.
Trout, Jessie M.
Thompson, Gladys M.
Tanner, Bhima L.
Thomson, Tena.
Thompson, Grace.
Tipling, Ethel M.
Tallon, Lillian.
Tilden, Annie R.
Trojan, Martha A.
Thompson, Elaine D.
Thompson, Maude I.
Tomlinson, Hazel W.
Tutt, Ruby P.
Tolton, Hattie.
Teeter, Laura.
Thompson, Mary E.
Urquhart, Margaret.
Uren, Antoinetta R.
Urquhart, Beatrice F.
Van Nostrand, Anna M.
Vanderwater, Helena B.
Vaughan, Norman.
Vipond, Velma M.
Veitch, Jessie W.
Vessot, Irene E. C.
Valley, Rubena M.
Vincent, Gladys I.
Will, Olive M.
Winter, Anna E.
Williams, Vera G.
Williams, Alta C.
Woolverton, Laura B.
Whittaker, Marjorie B.
Waller, Amy A.
Williams, Verina C.
Ward, Lola M.
Wills, Katharine E.
Wilson, Florence I.
Watson, Marion M.
Weseloh, Isabella O.
Willis, Vera.

VIII. Permanent Second Class Certificates—Con.

Wallace, Glenmore H.
Wilson, Margaret E.
Wilson, Myrtle E.
Wainman, Ada.
Walsh, Mabel A.
Webster, Beatrice.
Wight, Harvey S.
Watson, Edith E.
Watson, Elva R.
Watson, Margaret M.
Wilkinson, Bertha.
Wilkinson, Sarah J.
Willis, Hazel H.
Withers, Myrtle E.
Witthun, Edna J.
Wright, Adelaide M.
Wright, Gladys M.
Wallace, Bessie R.
Whitfield, Mabel E.
Walton, Maysie A.
Wiltse, Olive M.
Weir, Pauline G.
White, Tillie.
Wright, Ethel J.
Weeks, Gertrude L.
Wilson, Harriette S.
Woods, Annie E.
Williams, Pearl E.
Williams, Genevieve V.
Werden, Minnie E.
Walker, Mary E.
Weatherill, Nellie.
Whitehead, Janet L.
Wardell, Norma.
Ward, Helen M.
Watson, Maude.
Wilcock, Euretta K.
Webster, Gladys P.
Woods, Russell G.
Wilson, Ethel L.
Wilton, Kathleen.
Wade, Henrietta.
Whittington, Joseph W.
Wendt, William F.
Wiley, Mildred L.
Winter, Clara.
White, Olive W.
Wallace, Hazel E.
Wilkes, Ruth B.
Wright, Effa G.
Watson, Eleanor M.
White, Margaret D.
Wright, Jessie K.
Williams, Marguerite.
Walsh, Annie L.
Waddell, Mary.
Wilson, Marjorie.
Wallace, Margaret A.
Wilson, Annie B.
Wheeler, Rose E.
White, Pearl M.
Whaley, Mary A.
Wilson, Helen R.
Weaver, Olive J.
Winterborn, Gwendolyn.
Williams, Ela R.
Watson, Mary E.
Wylie, Jean V.
Wilson, Florence M.
Wheadon, Doris C.
Willcock, Gertrude M.
Watson, Edith G.
Young, Muriel M.
Young, Penelope F.
Yorke, Evadne S.
Yates, Hazel F.
Young, Reginald S.
Zeran, Hortensa M.
Zoller, Elmina L.

IX. Kindergarten Director's Certificate

Buckley, Augusta.

X. Manual Training Certificates

(a) Permanent Ordinary

Myrick, Walter G.

(b) Permanent Specialist

Mann, William S.

XI. Household Science Certificate

Permanent Ordinary

Grassie, Annie M.

XII. Professional Certificates, 1916

—	No. of Candidates	Extra Mural Students	High School Interim Certificates	Provincial First Class Certificates	Interim First Class Certificates	Permanent Second Class Certificates	Interim Second Class Certificates	Limited Third class Certs. valid for 5 yrs	District Certificates valid for one or two years	Extended District Certificates (Academic Course)	Total number of Certificates
Faculties of Education	379	66	*243	32	334	.....	17	....	.....	.....	626
Normal Schools	1550	127	....	....	....	231	1070	223	.....	.....	1,524
Autumn Model Schools	145	12	....	....	....	.....	....	149	4	.....	153
English-French Model Schools	105	1	....	....	....	.....	....	40	13	.....	53
Summer Model Schools	381	....	....	....	....	.....	....	86	148	118	352
Certificates issued on *pro tanto* standing	....	....	....	....	....	.....	8	17	.....	.....	25
Interim High School Certificates issued on reaching 21 years of age	....	....	†148	....	....	.....	....	....	.....	.....	148
Interim Certificates made permanent	....	....	....	133	....	863	....	....	.....	.....	996
Total number of newly certificated teachers	....	....	391	32	334	231	1095	515	165	.....	2,763

* Of these 170 were also granted I Class Certificates.
† These previously held Interim I Class Certificates.

Household Science

Number of Interim Ordinary Certificates 30
Number of Interim Specialist Certificates..... 1

Manual Training

Number of Interim Ordinary Certificates 4

Kindergarten Certificates

Number of Interim Kindergarten-Primary Certificates... 219

Summary of Certificates issued on the results of the examinations taken at the close of the Summer Schools

Elementary Agriculture and Horticulture (Interim)	40	Household Science, Elementary (Interim)	10
Intermediate Agriculture and Horticulture (Interim)	15	Kindergarten Primary (Interim)	195
Elementary Art (Interim)	67	Elementary Manual Training (Interim)	4
Supervisors in Art (Interim)	35	Elementary Vocal Music (Interim)	16
Specialists in Art (Interim)	50	Supervisors in Vocal Music (Interim)	7
Specialists in Commercial Subjects (Interim)	9	Elementary Physical Culture (Interim)	176
		Supervisors in Physical Culture (Interim)	31
		Specialists in Physical Culture (Interim)	54

In addition to the above, one hundred and twenty-eight Interim Certificates in Elementary Physical Culture were granted on *pro tanto* standing.

XIII. Temporary Certificates issued in 1916

Inspectorate	Number during 1st half year	Number during 2nd half year	Inspectorate	Number during 1st half year	Number during 2nd half year
Brant	1	.....	Perth, S	.....	.....
Bruce, E.	5	4	Peterborough, E	7	1
Bruce, W.	1	.....	Peterborough, W., & Victoria, E.	3	3
Carleton, E	4	4	Prescott and Russell	2	17
Carleton, W & Lanark, E.	7	7	Prince Edward	1	.....
Dufferin	.....	.....	Renfrew, N.	2	.....
Dundas	.....	.....	Renfrew, S	3	2
Elgin, E	.....	.....	Simcoe, N	.....	1
Elgin, W	.....	.....	Simcoe, S.	3	.....
Essex	1	1	Simcoe, E.	4	3
Essex, N. (in part only)	1	.....	Stormont	2	.....
Frontenac, S	8	4	Victoria, W	4	1
Frontenac, N., & Addington.	13	36	Waterloo, N (No. 1)	.....	.....
Glengarry	3	3	Waterloo, S. (No. 2)	.....	.....
Grey, E.	1	.....	Welland	.....	.....
Grey, W	.....	1	Wellington, N.	2	.....
Grey, S.	.....	.....	Wellington, S	.....	.....
Haldimand	.....	.....	Wentworth	.....	.....
Halton	.....	.....	York, N.	.....	.....
Hamilton City	1	.....	York, W.	.....	.....
Hastings, Centre	5	2	York, E.	.....	.....
Hastings, S.	4	.....			
Hastings, N.	5	6			
Huron, E	2	1	District Divisions:		
Huron, W.	.....	.....	No. I	12	11
Kent E.	.....	.....	No. II	2	6
Kent, W	.....	.....	No. III	2	7
Lambton, E. (No. 2)	.....	.....	No. IV	5	5
Lambton, West (No 1)	.....	2	No. V	12	7
Lanark, W.	20	14	No. VI	11	6
Leeds and Grenville, No. 1.	3	4	No. VII	16	8
Leeds and Grenville, No.2.	1	2	No. VIII	15	18
Leeds and Grenville, No. 3.	.....	3	No. IX	18	28
Lennox	8	7	No. X	4	2
Lincoln and Pelham Tp.	.....	.....	No. XI	2	.....
Middlesex, E.	.....	.....			
Middlesex, W	1	.....	English-French Divisions:		
Norfolk	2	.....	No. I	.....	2
Northumberland & Durham.			No. II	6	2
West, No. 1	1	.....			
Centre, No. 2	1	.....	R.C. Separate Sch. Divisions:		
East, No. 3	4	3	No. I	8	4
Ontario, N.	.....	.....	No. II	1	.....
Ontario, S	.....	.....	No. III	1	5
Oxford, N.	1	.....	No. IV	2	11
Oxford, S.	2	.....	No. V	14	28
Peel	.....	.....			
Perth, N.	.....	.....	Totals	270	281

APPENDIX U

LISTS OF ASSOCIATE EXAMINERS, AND CONTINUATION AND HIGH SCHOOL PRINCIPALS AND ASSISTANTS

I. Associate Examiners, 1916

Model Entrance, Lower School, Senior High School Entrance and Senior Public School Graduation Diploma

Grammar: Margaret H. Abel, Edna Alcombrack, Pearl Baker, Norah Belcher, Olvetta Brigham, Hattie Chapman, Bertha Dell, W. F. Darroch, Eliza Fitzgerald, Edna Graham, N. R. Gray, Ethel I. Good, May R. Hutchinson, Grace E. Johnston, Hally Johnston, Margaret E. Lutman, Mary E. Lynch, Anna Mackenzie, Pearl McGregor, Persie C. Meadows, J. D. Morrow, Mila O'Callahan, Mary A. Robinson, Gertrude Ryan, Lena Summers, Josie Switzer, Elizabeth A. R. V. Wilson, Violet Winnett, Elsie M. Wise, E. May Wyman.

Spelling: Florence Armstrong, William Baird, Pearl Z. Baker, Norma Gee, Elva Gould, Ethelberta Hodgins, Bessie R. Humphries, J. H. M. McRoberts, Clara McTaggart, Ada M. Menhennick, Marguerite O'Connell, J. M. Simpson, F. G. Sweet, Daisy Taylor, Grace E. Wightman.

Literature: Marion Lailey, Annie J. Willoughby.

Composition: Ida M. Mara.

History: Beatrice E. Anderson, Viola M. Davidson, Helen Dickson, Jessie Eckhardt, J. J. Edwards, Kate Elmslie, Jean H. Fleming, J. W. Fraser, Nellie Goodall, J. Margaret Grant, Annie Guilfoyle, Margaret J. Hinds, Gertrude Hodge, J. I. Hutchinson, P. T. Jermyn, Lydia M. Kay, Sada MacIntyre, Emma L. MacKay, Mary Moir, Christina H. Morton, M. Maude Norton, A. E. O'Neill, H. May Peregrine, Helena G. Raitt, Sadie Robinson, Maude L. Rose, C. A. Shaver, A. F. Smith, Inez Stafford, Elizabeth J. Wallen.

Arithmetic: Grace C. Austin, Eleanor Avery, C. H. Barnes, A. T. Batstone, C. K. Bluett, C. L. Brown, T. M. Cayley, B. W. Clark, Leo Hartford, Viva M. Hicks, Walter Keast, J. M. MacKay, C. H. McGee, Margaret K. Munro, A. M. Murday, John Sinclair, W. A. Skirrow, T. N. Stockdale, E. T. Young.

Algebra and Geometry: W. H. Rogers, G. B. Stewart.

Science: E. O. Awde, M. H. Ayers, J. A. Bell, Jessie C. Blacklock, G. L. Brackenbury, Alex. Caldwell, J. H. Cameron, J. E. Currie, Jean M. Davidson, C. G. Fraser, R. S. Hamilton, Ella A. Hanna, E. P. Hodgins, A. D. Hone, A. H. Irwin, N. A. Irwin, Laura Jeckell, W. A. Jennings, Flora E. Morgan, C. I. Nelson, Vera E. Norrish, Eva M. Ranson, B. A. Scott, Rena C. Scott, H. F. Schmietendorf, S. Louise Smith, R. J. Sinclair, Ruple Taite, Beatrix Tatham, R. D. Webb, A. M. Woodley, Mabel R. White.

Geography: Etta L. Barber, L. S. Beattie, A. C. Bernath, Hughena Campbell, J. M. Cameron, Evelyn R. Caverley, Florence Coghlan, Eva M. Crummer, Margaret M. Dawson, Annie L. Dunwoodie, Mary E. Edge, Lillian M. Ferguson, Lillian File, Evelyn C. Garrett, J. G. Gordon, A. Gilmour, Gertrude Griffiths, Florence Halliday, James Hartford, F. J. Johnston, F. R. Lishman, E. C. McQuarrie, Mayme H. Moynihan, Isabella C. Mitchell, Lulu E. Mulloy, J. L. O'Grady, Sarah E. Parr, H. A. Percy, H. S. Rosevear, Jessie Scott, Eva R. Stocker.

Writing: Cora Bartlett, Bessie Brimicombe, Ethel C. Eaton, Mrs. E. Ford-Firby, Mabel Howie, Ruby I. Kilty, Bertie L. Lindsay, T. W. Oates, Eva A. Power, Kate Richardson, Margaret E. Ross, Wilhelmina D. Rutherford, W. M. Shurtleff, W. J. Squire, Leah Webster.

Art: Mildred Agla, H. E. Bicknell, Minnie L. Brill, I. Violet Dickens, Emma L. Eby, Roxie A. Ellis, Rebecca Edwards, Muriel B. Ferguson, Lulu B. Fraser, Lucille Fraser, Helen M. Grieve, L. Morwenna Harris, C. W. Horton, Agnes M. Johnston, G. L. Johnston, Marcella T. Marshall, Mrs. J. E. MacGregor, Bessie McCamus, S. W. Perry, Laverna B. Stark, Helen Weatherill, Julia Weir, Leonard Wheelton.

Bookkeeping and Writing: Estella R. Cragg, J. A. Dickinson, Olive Fritz, G. A. Lucas, W. J. O'Brien, Margaret Smith, E. C. Srigley, Laura A. Wickett.

Household Science: Mayme Kay, E. Muriel Miller, Enid Robertson, Leila K. White.

Middle School Examination

Literature: Eleanor L. Clarke, Florence Bissonnette, H. W. Brown, Wilhelmina M. Ford, A. J. Husband, Sadie E. Iveson, Jessie S. Kilpatrick, G. L. MacDonald, Isabella J. Macdougall, Annie M. McArthur, J. G. McEachern, Rose McQueen, D. S. Paterson, Isabel K. Smith, Janie Thomas.

Composition: Annie E. Bentley, Wilhelmina Colbeck, H. E. Collins, Rosalie Dugit, D. A. Gilchrist, Emily McManus, Mrs. Ada Pattee, Harriet A. Patterson, W. B. Race.

British and Canadian History: E. E. Ball, W. A. Campbell, Irene M. Currie, Nellie DeCou, J. H. Dolan, Mary A. Harris, Ella L. Hawkey, Claire Hitchon, Florence A. McLeod, A. D. Norris, A. M. Robertson, J. B. Robinson, Frances A. Robinson, J. M. Zurbrigg.

Ancient History: Elsie Affleck, Henrietta E. Allison, J. G. Althouse, Jessie M. Bell, Winnifred Buchanan, J. O. Carlisle, W. J. Fenton, F. W. French, Edith G. Gibson, A. C. Haynes, Katie Johnston, Stella A. Jordan, A. W. Morris, W. J. Salter, W. B. Taylor, Alice B. Turner.

Algebra: W. R. Bocking, J. L. Cornwell, C. L. Crassweller, J. Davison, Thos. Hobbs, G. M. James, Pearl Payne, W. E. Rand, B. L. Simpson, W. L. Sprung.

Geometry: Florence J. Adams, E. W. Durnin, Loretto C. Fair, A. R. Girdwood, Marie A. Higginson, B. F. Howson, Olive P. MacKay, C. A. Milburn, J. H. Packham, J. F. Ross, G. R. Smith, F. D. Wallace, H. Blanche Willson.

Chemistry: R. P. Allin, G. H. Bielby, G. A. Carefoot, T. W. Elliott, J. W. Firth, T. H. Follick, Florence M. Flanagan, L. H. Graham, J. M. Hagan, R. G. Lawlor, B. E. Leckie, P. C. MacLaurin, C. F. Marshall, E. Morrison, A. B. Steer.

Physics: W. Bellamy, W. P. Ferguson, F. A. Flock, E. J. Halbert, W. J. Haydon, Thos. J. Hicks, J. W. Kelly, E. O. Liebner, J. L. MacLaurin, Priscilla V. M. McNeely, J. McNiece, D. H. McGill, W. J. Morrison, Elizabeth Penson, W. J. Saunders.

Art: C. W. Horton, J. R. Seavey, N. J. Thomas.

Latin: R. A. Barron, H. S. Berlanguet, J. C. Clark, W. C. Dowsley, A. A. Dundas, W. A. Graham, J. V. Henderson, C. A. Mayberry, Clara B. McKinley, J. H. Mills, J. Morgan, Winnifred E. Ovens, Peter Perry, J. C. Smith, G. E. Will.

Upper School Examinations

English: F. H. Bell, A. W. Burt, W. Elmslie, Elizabeth C. Henry, Gertrude Lawler, I. M. Levan, Ethel O. Scott, Ethel M. Sealey.

History: J. W. Charlesworth, Cora E. Hewitt, Laura L. Jones, G. W. Malcolm, L. J. Pettit, W. N. Sexsmith.

Classics: D. M. Grant, H. R. H. Kenner, J. T. Lillie, W. Logan, W. J. Twohey.

French and German: Janet Carter, F. H. Clarke, Jessie Houston, E. S. Hogarth, Sophia E. Marty, Clara Ward.

Mathematics: D. L. Cranston, R. A. Gray, W. J. Lougheed, A. M. Overholt, R. C. Rose, W. W. Rutherford, R. Shaw, R. Wightman.

Science: Annie A. Boyd, A. Cosens, H. B. Fetterly, A. P. Gundry, T. J. Ivey, J. R. Moore, E. Pugsley, G. A. Robertson, G. F. Rogers, W. Smeaton, P. M. Thompson, J. B. Turner.

Matriculation Examination

Literature: W. N. Bell, Marie Bibby, J. D. Christie, Evelyn D. Kellock, C. F. Price.

Composition: A. H. Dunnett, W. Kemp, H. M. McCuaig, J. Simpson.

Grammar: Frances D. Morden.

British and Canadian History: G. L. Gray, Maybelle M. Laing, A. I. Ogilvie, Mrs. F. G. Parker, Hazel I. Reid, Agnes Vrooman.

Ancient History: C. J. Burns, Helen Macdonald, C. B. Sissons, H. I. Strang, Madeline C. Young.

Classics: W. J. C. Barrett, J. S. Bennett, L. Brown, Hugh W. Bryan, C. E. Evans, J. A. Freeman, D. E. Hamilton, H. W. Kerfoot, Lillie E. C. Lloyd, J. F. Messmore, Mabel Nesbitt, S. F. Passmore, Gertrude Pringle, L. C. Smith.

French and German: Mabel M. J. Baird, Lydia A. Barr, Annie B. Brain, Effie M. Bunnell, L. J. Clark, H. Gertrude Coad, Margaret Cook, T. E. Elliott, H. W. Irwin, F. C. A. Jeanneret, J. S. Lane, Minnie F. Libby, D. MacKay, Helen C. Mackintosh, Aletta E. Marty, H. S. McKellar, Jessie Muir, N. L. Murch, Hattie L. Pinel, Ada E. Richardson, Marion H. Rose, S. Ada Smith, H. B. Tapscott, John B. Wallace, Mary I. Williams, F. A. Whitton.

Arithmetic: A. C. McPhail.

Algebra: J. T. Crawford, Martha Fitch, Mary A. Gillespie, M. W. McHugh, Mary E. G. Waddell.

Geometry: A. Cole, U. J. Flach, W. W. Knight, I. T. Norris, J. G. Workman.

Chemistry: E. J. Corkill, J. P. Hume, F. A. Stuart, J. B. Tingle.

Physics: G. R. Anderson, J. L. Mitchener.

II. List of Principals and Assistants of Continuation Schools, January, 1917

Post Office and Name of School	Names and professional qualifications of Teachers (Unless otherwise stated, the teacher is the holder of a Permanent First Class or a High School Assistant's certificate.)	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. & Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High or Continuation Sch.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
Acton	Stewart, William H.				1903	13	15	1,250		
	Baker, Pearl Z.			Art	1914	6	2			875
Agincourt, 14 Scarboro'..	Peterson, Helen B.				1916	2	2	1,000		
Alvinston	Carbert, Robert H.				1911	8	3	1,300		
	Turvey, Ina M.		Art. (Int.)	Phys. Cul.	1913	3	1			750
Arkona	Augustine, Annie F.			Art	1916	5	5	875		
Ayr	Chisholm, Renw'k J..(Int.)*			Phys. Cul.	1915	3		1,050		
	Winhold, Edward P....(Int.)			Phys. Cul.	1915	1	1		775	
†Bancroft	Keenan, Edward J.			Phys. Cul.	1914	10	2	1,100		
Bath	Morgan, Flora E.			Phys. Cul.	1915	4	3	850		
	Walker, Ruth H. .....(Int.)	B.A., Tor.			1916					650
Beaverton	Webb, Roland D. .....*				1917	6	1	1,500		
	Johnston, Helena E.			Art	1916	5				775
Beeton	Stewart, Bertha R.			Hous. Sci.	1917	1	7	1,000		
	Adams, Ada				1916		2			700
Belmont, U 11, S. Dorchester	MacKillop, Oliver M.				1913	3	4	1,300		
	Venning, Hazel N. ...(Int.)				1916		1			700

Blenheim	Mackenzie, Elizabeth S.....*			Phys. Cul.	1916	7½	1	1,050		
	Russell, Flossie Lillian				1916	½	2½			700
Blind River	Brunkard, Ethel				1915	3½	4½	950		
	McGibbon, Hazel M.				1916	3	½			750
†Blyth	Money, Mabel L.				1916	½	5	1,000		
Bothwell	O'Leary, Susan .....*			Phys. Cul.	1913	5½	1½	1,025		
	McCoig, Mary Alice				1916	½	3½			650
Bowesville, 5 Gloucester	Moynihan, Mayme H.....*				1915	4	1	850		
Bracebridge	Shannon, Samuel	B.A., Tor.			1908	9	3	2,000		
	File, Edna G.			Phys. Cul.	1916	1	3			800
	Reid, Jean G.	B.A., Queen's.	Fr. & Ger. (Int.)	Art	1917	4				900
Bridgeburg	Henderson, Hubert M. (Int.)*			Phys. Cul.	1912	4½	1	1,200		
	Chambers, Josephine...(Int.)	B.A., Tor.			1914	3	½			800
Bruce Mines	Carter, George W.	B.A., Tor.			1917		2	1,200		
	Stewart, Etta M.	B.A., Tor.	Fr. & Ger., Eng.		1915	18				750
Brussels	Scott, Benjamin S.			Phys. Cul.	1914	6	3	1,200		
	Jardine, Amy M.			Art	1916	½	3			700
Burk's Falls	Wilson, James S.			Phys. Cul.	1917	2½	3½	1,300		
	Stanley, Pauline M. ...(Int.)	B.A., West.			1916	½	3			850
Burlington	Smith, Daniel E.	B.A., Tor.		Agr. & Hor.	1909	13½	2	1,500		
	Ghent, Lucy T. B.	B.A., Tor.			1911	5½				850
Cannington	Summers, Christopher			Agr. & Hor.	1915	6½	5	1,225		
	Moir, Mary I.	B.A., Tor.		Art	1915	5½	½			775
Cardinal	Ranson, Eva M.			Art	1913	6	3	1,000		
	Ballance, Helen A.			Phys. Cul.	1913	3½	3½			750
Carp, 3 Huntley	Stewart, Annie J. .....*	B.A., Queen's.		Phys. Cul.	1911	6½	1½	1,075		
	Ferguson, Lillian				1915	6½	2			800
Chapleau, 1 Chapleau	Traver, Lillie A.	B.A., Queen's.	Eng. and His.	Phys. Cul.	1916	½	3½	1,100		
	Rutledge, Evelyn M...(Int.)				1915	1½				800

*Endorsed for Principalship. †One teacher devotes full time and one, half-time to Continuation School work.

List of Principals and Assistants of Continuation Schools, January, 1917—Continued

Post Office and Name of School	Names and professional qualifications of Teachers (Unless otherwise stated, the teacher is the holder of a Permanent First Class or a High School Assistant's certificate.)	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. & Hor. the Certificate is Intermediate.)	Date of Appointment	No. of years' experience in a High or Continuation Sch.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
Claremont, 15 Pickering..	Wilker, Milton J.	.....	Phys. Cul..(Int.)	.....	1914	2½	2	1,000	.....	.....
	Rice, Elsie M.	.....	.....	.....	1914	2½	....	.....	.....	675
Clifford	Ross, Margaret E.	.....	.....	Art	1913	3	14	1,000	.....	.....
	Stanley, Fredrica .....(Int.)	.....	.....	Phys. Cul.....	1916	½	....	.....	.....	700
Coldwater	Clark, Joseph C.....§	B.A., Tor.	Class	.....	1915	19	2½	1,100	.....	.....
	Mullette, Fernia H. ...(Int.)	.....	.....	.....	1916	½	1	.....	.....	750
Comber, 4 Tilbury W.	Cornforth, Helen	.....	.....	.....	1916	½	3½	750	.....	.....
	Maitland, Jessie H. ...(Int.)	B.A., Queen's..	Eng. & Hist.	.....	1916	½	....	.....	.....	700
Cookstown, 5 Essa	Wightman, Keith	.....	.....	.....	1915	1½	6	1,200	.....	.....
	Goodall, Nellie	.....	.....	.....	1910	7	....	.....	.....	700
Creemore	Caverley, Evelyn R. .....*	.....	.....	.....	1915	6	1	900	.....	.....
	Somerville, Eva M.....(Int.)	.....	.....	Phys. Cul.....	1917	2	....	.....	.....	800
Delaware, 2 Delaware.....	Conway, Irene E.....	.....	.....	Art.....	1916	7	3	1,000	.....	.....
Delhi	Blacklock, Jessie C.	.....	.....	Art, Phys. Cul....	1916	4½	2	1,000	.....	.....
Drayton	Clark, George A.....	.....	.....	Agr. & Hor.	1913	11½	6	1,300	.....	.....
	Ellerby, Edna F.	.....	.....	Phys. Cul.	1913	3½	4½	.....	.....	750
	Smith, Clara C. .....(Int.)	B.A., Tor.	.....	Phys. Cul.	1916	½	½	.....	.....	725
Dresden	Bowden, Wm. L.	.....	.....	Agr. & Hor. P. Cul.	1913	3½	12	1,300	.....	.....
	French, Dorothy .....(Int.)	B.A., Tor.	.....	.....	1916	½	....	.....	.....	750

†Drumbo, 11 Blenheim	Mott, Stella K.	B.A., Tor.	Eng. & Hist. (Int.)		1917	5½	4	1,000		
Dryden	Adams, John M.				1914	5	8	1,200		
Eganville	Dunwoodie, Annie L.				1915	7	2	1,000		
	Sly, Wilhelmina (Int.)	B.A., Queen's			1916	½	4			700
Eganville (R. C. S. Sch.)	McHugh, Elizabeth (S. St. Ernestine) (II Cl.)				1899	16½	11	800		
	Maher, Margaret (S. Mary Aurelia)		Art (Int.)		1914	2½	12½			700
Elmira	Crawforth, Alma W.	B.A., Tor.			1914	2½	3½	1,100		
	McDonald, Margt. D. (Int.)				1915	2½	1			750
Ennismore, 4 Ennismore	Young, Clara *				1916	4		1,000		
	McNamara, Elizabeth			Phys. Cul., Art	1916	3½				750
†Erin	Partridge, James A.		Phys. Cul. (Int.)		1916	½	2½	1,050		
Exeter	Spark, George *	B.A., Tor.		Agr. & Hor.	1914	5½	3	1,500		
	Dobson, Viola J. (Int.)	B.A., Tor.		Phys. Cul.	1916	1½				750
	Quinn, Mamie G. (Int.)		Com.		1917		1½			800
Fenelon Falls	Nesbitt, Mabel E. §	B.A., Queen's			1917	4½	1	1,200		
	Henderson, Orville J. (Int.)				1916	½			800	
Feversham, 7 Osprey	Warren, Violet	B.A., Queen's	Eng. & Hist. (Int.)	Art	1916	½	5½	750		
Finch	Armstrong, Eunice			Art	1911	7½	2½	1,050		
	Daley, Muriel M.			Phys. Cul.	1913	3½	1½			800
Fingal, 12 Southwold	Bell, John A.			Agr.&Hor.,Ph.Cul.	1917	4		1,100		
	Hicks, Viva M.				1915	8½	1			800
Fitzroy Harbour, 8 Fitzroy	Stapleton, Louis J.				1916	½	2	1,000		
	McSherry, Charlotte				1917	3	3			700
Fort Frances	Pickering, John R.				1915	7½	2	1,450		
	Smith, Eleanor (Int.)				1915	1½				850

*Endorsed for Principalship.
§High School Principal's certificate.

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List of Principals and Assistants of Continuation Schools, January, 1917—Continued

Post Office and Name of School	Names and professional qualifications of Teachers (Unless otherwise stated, the teacher is the holder of a Permanent First Class or a High School Assistant's certificate.)	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. & Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High or Continuation School	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
Frankford	Bell, John M.				1915	1½	31	1,100		
	Anderson, Nellie L.				1915	7½	3			700
Gore Bay	Hoover, Egbert E.				1910	9½	3	1,200		
	Stevenson, Marjorie T. (Int.)			Art	1914	2½				800
Grand Valley	Taite, Ruple				1916	4½	3	1,150		
	Wallace, Verna (Int.)				1916					700
Hanover	Magee, James A.			Phys. Cul.	1905	13½	2	1,500		
	Wright, Cassie (Int.)			Phys. Cul., Art	1914	2½	1½			750
Harrow, 9 S. Colchester	Wightman, Grace E.				1913	6	3	900		
	Maitland, Marion (Int.)			Phys. Cul.	1916	½	1			700
Havelock	Danard, Charles H.	B.A., Tor.	Phys. Cul. (Int.)		1915	1½	2½	1,100		
	Brewster, Gladys I. (Int.)			Phys. Cul., Art	1914	2½				700
Highgate, 6 Orford	Burke, Alex.				1913	22½	13	1,300		
	Broad, Luella (Int.)	B.A., Tor.		Phys. Cul.	1916	2	1			750
Huntsville	Bernath, Alfred C.				1900	15½	5½	1,500		
	Peregrine, H. May			Art	1912	9	2			800
Jarvis	Dickson, Helen M.		Com. (Int.)	Phys. Cul.	1916	4½	3	1,000		
Jockvale, 10 Nepean	Tierney, Olive				1915	1½	3	825		

Kars, U. 3 North Gower..	Heather, Eunice			Phys. Cul.	1915	1½	2	800		
	Gardiner, Mae (Int.)	B.A., Queen's..			1916	1½				700
Keewatin	Baker, William T.				1913	9	5	1,550		
	Going, Ambia L. (Int.)	B.A., Tor.	Art		1916	½				850
Kenmore, 15 Osgoode	Fraser, Christine	B.A., McM.			1916	2½	5	850		
	Wallen, Wilfrid B. (Int.)			Phys. Cul.	1915	1½			750	
†Kinburn	Richardson, Julia I.				1917	2	3½	1,000		
Lakefield	Simpson, John M.	B.A., Queen's..	Phys. Cul. (Int.)		1916	7½	9	1,300		
	Park, Camilla H. (Int.)	B.A., Tor.			1915	1½	1½			900
Lanark	Beatty, Robert. (II Class)				1889	27½	9	900		
	Ryan, Gertrude (Int.)	B.A., Tor.			1916	½				750
Lansdowne, 9 Leeds and Lansdowne Front	Boyd, Agnes M.	B.A., Queen's..			1914	2½	4	800		
Little Current	Coghlan, Florence				1916	5½	2½	1,000		
Lucknow	Doupe, Henry A.			Art	1913	8½	2½	1,350		
	Rutherford, Wilhelmina D..				1916	4½	4			800
†Malakoff, 3 Marlborough	Lee, Sadie	B.A., Queen's..	Eng. & Hist. (Int.)		1916	½	3½	850		
Manitowaning, 2 Assiginack	Hart, Luther S.				1916	½	4	850		
Maxville	Iveson, Sadie E.	B.A., McM.			1915	4	3	1,000		
	MacLeod, E. Blanche.. (Int.)	B.A., Queen's..		Art	1916	½				750
Melbourne, U. 16 Caradoc	Robinson, Wm. G. (II Cl.)				1900	16½	5	950		
	Davidson, Georgia	B.A., West.		Art	1915	2	4			800
Merlin, U. 5 Raleigh	Horan, J. Cecelia			Art	1916	3½	2	800		
	Glasgow, M. Irene (Int.)			Phys. Cul.	1915	1½				675
Merrickville	Lutman, Margaret E.			Phys. Cul.	1912	4½	2	1,000		
	Switzer, Neva (Int.)				1916	½				700
Metcalfe, 11 Osgoode	White, Mabel R. *			Phys. Cul.	1914	5	⅓	1,000		
	Rolston, Ella G. (Int.)	B.A., Queen's..			1915	1½				700

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								Principal	Male Assistants	Female Assistants
								$	$	$
Millbrook	Hampton, David ....(II Cl.)				1883	20½	25	825		
	Mitchell, May			Art, Phys. Cul....	1912	8	5½			775
Milton	Marcellus, J. Ernest	B.A., Queen's.			1912	10	2	1,600		
	Fleming, Jean H.			Art	1914	5	½			900
Mount Albert, 13 East Gwillimbury	Kehoe, Martin B.				1915	1½	2	1,200		
	McDowell, Jennie				1917	1½	10			700
†Navan, 3 Cumberland	Maxwell, Mabel I.	B.A., Queen's.		Art	1916	½	2	1,000		
New Hamburg	Smith, James M.			Phys. Cul.	1908	8½	6	1,500		
	Abel, Margaret H.			Art	1913	7	2½			750
New Liskeard	Dobbie, Isabella E.			Agr. & Hor.	1911	8	18	1,300		
	Hume, Annie I.....(Int.)	B.A., Queen's.	Eng. & Hist.	Phys. Cul.	1916	1½				900
N. Augusta, 17 Augusta	MacIntyre, Lillian			Phys. Cul., Art...	1916	3	2	925		
	Rendall, Stanley D....(Int.)			Phys. Cul.	1916	1½			700	
North Gower, 6 N. Gower.	White, Margaret E.			Phys. Cul., Art...	1916	2½	2	900		
	Lee, Gertrude M. ....(Int.)				1916	½	1			700
Norwich	Cayley, Thomas M.		Phys. Cul.		1913	3½	13	1,100		
	Brigham, Olvetta			Art	1916	7½	4½			800
Odessa, 13 Ernesttown	Austin, Prudence M.		Art .....(Int.)	Phys. Cul.	1916	2½	3	900		
	Judge, Albert E. ....(Int.)	B.A., Queen's.			1916	½	4		750	

Oil Springs	Warwick, Bruce D.				1916	½	2	900		
	Stinson, Allie		Phys. Cul...(Int.)		1916	2	6			900
Orono, 12 Clarke	Wise, Elsie M.				1910	9½	3	1,000		
	Staples, Edna E. ....(Int.)			Phys. Cul.	1914	2½				700
Paisley	Mark, Alfred E.				1916	3½	6	1,100		
	Gliddon, Mildred E.				1916	½	2			700
Pakenham, 4 Pakenham	Willoughby, Annie J.			Phys. Cul.	1916	6½	5	1,200		
	Mazinke, Henrietta E.			Art	1914	3	½			850
Palmerston	Anglin, Sara				1913	8	10	1,400		
	Mitchell, Grace L.			Art, Phys. Cul.	1916	3½				700
Plattsville, 24 Blenheim	Page, Jennie	B.A., Queen's.		Art	1916	½	16	1,100		
	Fraser, Bertha F. ....(Int.)	B.A., West.		Phys. Cul.	1916	½				700
Port Burwell, 2 Bayham	Hicks, Frederick M.			Phys. Cul.	1916	10½	2½	1,200		
	Donnelly, Teresa G.				1914	2½	2			700
Port Colborne	Cameron, Allan A.				1915	11½	3	1,400		
	Carter, Clara L.	M.A., Tor.		Art	1914	2½				700
Powassan	Manson, Susie H.			Phys. Cul.	1915	3½	5	1,000		
†Princeton, U. 21 Blenheim	Ionson, Margaret A.	B.A., Queen's.			1916	1½	11	1,100		
Richard's Landing	Ryerson, Catherine G. S....*	M.A., Tor.	Science.. ..(Int.)		1915	3½		800		
Richmond	Smith, Annie A.			Phys. Cul.	1916	2½	3½	900		
Ridgeway, 11 Bertie	Woodley, Arthur M.			Agr. & Hor.	1913	9½	7	1,700		
	Stark, Ethyle .....(Int.)	B.A., Tor.		Phys. Cul.	1915	1½				800
Ripley, 10 Huron	Strathdee, Mary			Art	1914	2½	18	1,050		
	Gilfillan, Viola	B.A., Tor.		Phys. Cul.	1914	2½				850
Rodney	Yorke, Chas. G.	B.A., Queen's.	Phys. Cul...(Int.)		1914	2½	4½	1,150		
	Miller, Ada A.			Art, Phys. Cul.	1914	2½	2½			725
Russell, 2 Russell	Collins, James	B.A., Tor.			1914	2½	3½	1,000		
	Elmer, Margaret T....(Int.)	B.A., Queen's.			1915	1½	1½			700

*Endorsed for Principalship. †One teacher devotes full time and one, half-time to Continuation School work.

List of Principals and Assistants of Continuation Schools, January, 1917—Continued

Post Office and Name of School	Names and professional qualifications of Teachers (Unless otherwise stated, the teacher is the holder of a Permanent First Class or a High School Assistant's certificate.)	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. & Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High or Continuation Sch.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
St. George, 8 S. Dumfries.	Gilchrist, John	B.A., Queen's.			1916	1/12	4	1,200	.....	.....
	Shields, Jean (Int.)	B.A., Queen's.			1916	1 1/2	2	.....	.....	750
Schomberg, 14 King	Bell, Mary *			Phys. Cul.	1916	2 2/12	1	900	.....	.....
Southampton	Douglas, Adam C.			Phys. Cul.	1916	4	2 1/2	1,100	.....	.....
	Kay, Lydia M.			Phys. Cul.	1912	4 1/2	1	.....	.....	900
South Porcupine, U. 1 A. Tisdale	Norton, Ida				1916	9	5	1,000	.....	.....
Spencerville, 15 Edwardsburg	Ranson, Bertha M.			Phys. Cul.	1914	2 1/2	2	950	.....	.....
	MacIntyre, Euphemia. (Int.)	B.A., Queen's.			1915	1 1/2	....	.....	.....	750
Springfield	Thompson, Howard E.			Phys. Cul.	1914	2 1/2	2	1,200	.....	.....
	Campbell, V. Eunice...(Int.)			Art, Phys. Cul.	1916	1 1/2	3	.....	.....	800
Stayner	Tench, William H.				1916	1/2	3	1,100	.....	.....
	Grieve, Helen M.			Art	1912	4 1/2	....	.....	.....	900
Stella, 1 Amherst Island	Stewart, Ruth (Int.)‡	B.A., Queen's.	Mods. & Hist.		1916	1/2	2	800	.....	.....
Stouffville	Innes, Alexander R.			Phys. Cul.	1916	28 1/2	6	1,150	.....	.....
	Brain, Annie B.	B.A., Tor.		Phys. Cul.	1915	5 1/2	1	.....	.....	750
Sturgeon Falls	Parr, Sarah E.		Art (Int.)		1916	7	8	1,000	.....	.....
†Sutton	Eckhardt, Jessie E. *	B.A., McGill			1915	5	2	1,000	.....	.....

Tamworth	Fletcher, Douglas R.			Phys. Cul.	1915	2	4	1,100		
	Johnston, Leila G.		Art (Int.)		1916	½	3			600
Tara	Gilmour, Allan	B.A., Queen's.			1911	11	4½	1,200		
	Stuart, Agnes M. (Int.)	B.A., Tor.	Mods. & Hist.		1917					750
Tavistock	Lawrence, Jessie F.	B.A., Tor.			1916	1½	8	1,300		
	Bell, Jessie M.	B.A., Tor.	Mods. & Hist.	Art	1916	6½	1½			800
Teeswater	Thompson, Harry C.				1912	4½	3	1,050		
	Guilfoyle, Annie				1915	6½	1			800
Thamesville	Smith, Donald G.			Phys. Cul.	1914	2½	3½	1,200		
	Stark, Laverna B.			Art, Phys. Cul.	1915	3½	3½			675
Thessalon	Crummer, Eva M.*			Phys. Cul.	1917	7	1½	1,100		
	Hale, Mary E. (Int.)	B.A., Queen's.			1916	½				800
Thornbury	Schooley, Fred T.			Phys. Cul.	1915	11½	7	1,200		
	Hartman, Helen (Int.)			Art	1916	½	1			650
Thorndale, 8 W. Nissouri.	Delmage, Edith R. §	B.A., McM.	Math.	Phys. Cul.	1917	9½	2	1,200		
	Lake, Ethel M.	B.A., Queen's.			1917	½	6			800
Tilbury	Fawcett, John T. ***(Int.)				1916	½	1	1,000		
	Wells, Vera M. (Int.)			Phys. Cul.	1916	2½				700
Tottenham	Clarke, Frank B.			Phys. Cul.	1911	13½	6	1,200		
	McTurk, Isabel (Int.)	B.A., Queen's.			1916	½				700
Tweed	Irwin, Alfred H. (Int.)*		Phys. Cul.		1916	5	1½	1,300		
	****									
Warkworth, 2 Percy	Sillers, M. Roberta	B.A., Queen's.		Phys. Cul.	1916	½	4	1,000		
	Husband, Edith P.	B.A., Queen's.			1916	½	4			800
Webbwood	Shepley, J. Evelyn				1916	1½	2	1,000		
West Lorne	Rogers, William C.	M.A., Queen's.			1916	6	2½	1,100		
	Graham, A. Fern			Phys. Cul.	1916	2½	1			900
Westmeath, 3 Westmeath.	Norton, M. Maud		Art (Int.)	Phys. Cul.	1912	5	10	1,100		

*Endorsed for Principalship.
†One teacher devotes full time and one, half-time to Continuation School work.
**Assistant to be appointed.
***Not qualified as Principal.
‡Temporary Certificate as Principal.
§High School Principal's certificate.

List of Principals and Assistants of Continuation Schools, January, 1917—Continued

Post Office and Name of School	Names and professional qualifications of Teachers (Unless otherwise stated, the teacher is the holder of a Permanent First Class or a High School Assistant's Certificate.)	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. & Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High or Continuation Sch.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
†Westport	Traver, Edith A.			Phys. Cul.	1916	4½	2	1,200	.....	.....
†Westport (R. C. S. Sch.)	McIntosh, Catherine (Sr. St. Andrew) ..... (H. Class)	B.A., Queen's		Art	1888	28	....	700	.....	.....
Wheatley	Eaton, Ethel C.			Art, Phys. Cul.	1914	3½	2	1,000	.....	.....
	Hicks, E. Meryl ..... (Int.)			Phys. Cul.	1916	½	½	.....	.....	750
†Winona, 1 Saltfleet	Van Duzer, Mabel L. §	B.A., Tor.	Art ..... (Int.)		1914	5½	....	950	.....	.....
Wolfe Island, 4 Wolfe Island	Switzer, Josie E.				1917	5½	4	750	.....	.....
Wroxeter	Costin, Carrie L.	B.A., Queen's			1916	1	3	900	.....	.....
	Hicks, Evalyn ..... (Int.)			Phys. Cul.	1915	1½	....	.....	.....	625

†One teacher devotes full time and one, half-time to Continuation School work.

§High School Principal's certificate.

SUMMARY, CONTINUATION SCHOOLS, JANUARY, 1917

Number of Schools, Sex and Number of Teachers, and Percentages

Schools

Three-teacher Schools	3
Two-teacher Schools	96
*One-teacher Schools	34
Number of Schools	133
Increase for the year	1

Teachers

Men	67
Women	167
Total	234

Percentages

January, 1917:	Men, 28.63;	Women,	71.36
January, 1916:	" 31.93;	"	68.06
January, 1915:	" 30.80;	"	69.19
January, 1912:	" 39.44;	"	60.55

Salaries

Highest Salary, Principals	$2,000
" " Male Assistants	800
" " Female "	900
Average Salary, Principals	1,093
Increase for the year	7
Average Salary of Assistants	757
Increase for the year	17
Average Salary all Teachers	949
Increase for the year	17
Average Salary, Male Assistants	755
Increase for the year	47
Average Salary, Female Assistants	758
Increase for the year	16

University Graduates, Specialists, etc.

Graduates	71
Non-Graduates	163
Percentage of Graduates, 1917	30.34
" " 1916	24.37
Percentage of Non-Graduates, 1917	69.65
" " 1916	75.63
Specialists	6
Interim Specialists	26
Percentage of Specialists and Interim Specialists	13.67
Elementary Certificates in Art	41
" " Physical Culture	76
" " Household Science	1
Intermediate Certificates in Agriculture and Horticulture	8
Teachers holding Elementary or Intermediate Certificates	111

*Twelve of these schools have in addition one teacher who devotes at least half-time to Continuation School Work.

III. List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917

Collegiate Institutes	Names of Teachers	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. and Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High School or Coll. Inst.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
Barrie	Henry, Stanley H.	M.A., Queen's	Sci. (Int.), Math. & Phys.		1916	6	6	1,800	.....	.....
	Hay, Andrew	.....	Math.	.....	1882	38	8	.....	1,350	.....
	Cowan, I. Kathleen	B.A., Tor.	Art (Int.), Classics	Phys. Cul.	1914	4	....	.....	.....	1,300
	Burris, Mae N. (Int.)	B.A., Tor.	Mods. & Hist., Phys. Cul.	.....	1915	1	....	.....	.....	1,200
	Power, Eva A.	.....	Com. (Int.)	Phys. Cul.	1915	3	3	.....	.....	1,100
	Heath, Horace J. (Int.)	B.A., Tor.	Science, Phys. Cul.	.....	1915	1	3	.....	1,500	.....
	*Burns, Olive M.	B.A., Queen's	.....	.....	1916	2	....	.....	.....	1,000
	Keagey, Jessie L. (Int.)	B.A., Tor.	Phys. Cul.	.....	1916	2	1	.....	.....	900
Brantford	Burt, Arthur W.	B.A., Tor.	Mods. and Eng.	.....	1893	38	....	2,150	.....	.....
	Passmore, Samuel F.	M.A., Tor.	Classics	.....	1885	36	....	.....	1,650	.....
	Coates, Daniel H.	B.A., Tor.	Math.	.....	1893	29	....	.....	1,650	.....
	Bunnell, Effie M.	B.A., Tor.	Eng., Fr. and Ger.	.....	1891	25	....	.....	.....	1,650
	Green, Walter W. H. (Int.)	B.A., Queen's	Science, Phys. Cul.	.....	1916	1	....	.....	1,600	.....
	Eadie, William M. (Int.)	B.A., Queen's	.....	.....	1916	2	15	.....	1,300	.....
	Greer, Laura E. (Int.)	B.A., Queen's	Art	.....	1916	1	2	.....	.....	1,100
	Ryan, Gertrude	.....	.....	.....	1912	7	....	.....	.....	1,150
	Fair, Loretta C.	B.A., Tor.	Math. and Phys.	Phys. Cul.	1915	4	....	.....	.....	1,350
	McFadden, Robt. W. E. (Int.)	B.A., Tor.	.....	.....	1916	1	....	.....	1,250	.....
	Shorey, Percival W. M. (Int.)	B.A., B.Sc., Qu's	.....	.....	1915	1	....	.....	1,350	.....
	Scanlon, James V. (Int.)	.....	.....	.....	1915	1	3	.....	1,350	.....
	Runnings, Joseph B. C. (Int.)	.....	Phys. Cul.	.....	1915	1	1	.....	1,250	.....
	Shultis, Adam	.....	Com.	.....	1896	20	11	.....	1,650	.....
	Dixon, Nora G. (Int.)	.....	Com.	Art, Phys. Cul.	1915	1	2	.....	.....	800
	Good, Ethel I.	.....	.....	.....	1914	5	5	.....	.....	800
	Redick, Claire L. (Int.)	B.A., Tor.	Phys. Cul.	.....	1915	1	1	.....	.....	850
	Balfour, Agnes W. (Int.)	B.A., Queen's	Eng. and Hist.	Art	1917	2	6	.....	.....	800
	Gee, John A. (Int.)	.....	(Manual Training Instr.)	.....	1916	1	....	.....	1,400	.....
	McNally, Frances M. (Int.)	.....	(Household Sci. Instr.)	.....	1915	3	12	.....	.....	850

Brockville ...	Husband, Almeron J.	B.A., Tor.	Eng. & Hist., Fr. & Ger.		1895	21	3	2,000		
	Smith, Frederick P.	M.A., Queen's	Science	Phys. Cul.	1916	8½	5		1,600	
	Somerville, Thomas C.	B.A., Tor.	Mods. and Hist.		1909	22½	1		1,600	
	Giles, A. Edith		Art		1890	27	3			1,250
	Richardson, Kate		Art (Int.), Com.		1898	21	6			1,250
	McCormack, Mary I.	B.A., Queen's		Phys. Cul.	1907	9	2			1,200
	Beattie, Lewis S.		Phys. Cul. (Int.)		1910	8			1,350	
	Fleming, Rita M.	B.A., Tor.	Math. and Physics		1914	2½	2½			1,200
	Hambly, Philo K. (Int.)	B.A., McM.	Classics	Phys. Cul.	1916	½				1,300
	Hubbs, Maude (Int.)	B.A., Queen's			1916	½	1			800
Chatham ...	Twohey, William J.	M.A., Tor.	Classics		1904	32		2,200		
	Paterson, David S.	B.A., Tor.	Eng., Fr. and Ger.		1888	40	1½		1,600	
	Edward, Frankland W.		Com.		1907	11½			1,800	
	Sexsmith, William N.	B.A., Tor.	Eng. and Hist.		1907	12½	3		1,800	
	Gregory, Stella L.				1911	10	2			1,100
	Houston, Jessie	B.A., Tor.	Mods. and Hist.		1913	12½				1,500
	Asselstine, Oliver	M.A., Queen's	Math.		1915	9½			1,700	
	Allin, Richard P.	M.A., Queen's	Science		1915	4½			1,700	
	Challinor, John L.			Phys. Cul.	1915	3½			1,200	
	Arnold, Winnifred M. (Int.)		Art	Phys. Cul.	1915	1½	2			1,000
	Sayers, John R.		(Manual Train. Inst.)		1917	3½			1,200	
	Grassie, Annie (Int.)		(Household Science Inst.)		1914	2½	3½			900
Clinton ...	Treleaven, John W.	B.A., Tor.	Classics	Phys. Cul.	1907	25		1,700		
	Macdougall, Isabella J.	B.A., Tor.	Eng. & Hist., Fr. & Ger.		1910	10½	3			1,300
	Kilty, Ruby I.		Com. (Int.)	Phys. Cul.	1914	3	3			1,000
	Adams, John G. (Int.)	B.A., Queen's	Science	Agr. & Hort.	1915	2			1,400	
	Sinclair, Margaret (Int.)		Art		1916	½	13			1,000
	Graham, Samuel H. T. (Int.)	B.A., Tor.	Math. and Phys.	Phys. Cul.	1916	½			1,300	
Cobourg ...	Arthur, Colin C.	M.A., Queen's	Science		1893	25	1	2,000		
	Jones, Laura L.	B.A., Tor.	Eng., Fr. and Ger.		1898	23½				1,450
	Belcher, Norah T.	B.A., Tor.	Classics	Phys. Cul.	1914	4½				1,400
	Henry, Thomas M.	B.A., Tor.	Math.		1916	33	4		1,400	
	Davidson, Robert D. P. (Int.)	B.A., Queen's	Science	Phys. Cul.	1916	1½	4		1,300	
	Hickey, Philippa A. V.				1916	4½	5			800
	Devitt, Leslie K. (Int.)		Phys. Cul.		1916	½	1		1,000	
	Elcoat, Hazel I. (Int.)		Com., Art		1916	2½	1½			1,200
Collingwood ..	Feasby, William J.	B.A., Queen's	Fr. & Ger., Mods. & Hist.		1912	8½	5	1,900		
	Hodgins, Ekron P.	B.A., Tor.	Science		1914	3½			1,600	
	Southcombe, Wm. J. S. (Int.)	B.A., Tor.	Classics, Phys. Cul.		1916	1½			1,450	

*In place of F. N. Grandy—on Active Service.

List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917– Continued

Collegiate Institutes	Names of Teachers	Degrees	Specialists	Elementary — and Intermediate Certificates (In the case of Agr. and Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High School or Coll. Inst.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
Collingwood—Con.	Train, Florence J.	B.A., Tor.	Math. and Phys.	Phys. Cul.	1916	2½	....	.....	.....	1,350
	Carman, Margaret E.	M.A., Tor.	Mods. and Hist.		1914	5½	....	.....	.....	1,300
	Smith, Margaret	.....	Com.	Art	1907	22	3	.....	.....	1,350
	Sanderson, Lenore A...(Int.)	B.A., Queen's	Art	Phys. Cul.	1915	1½	....	.....	.....	1,100
	Milne, James W.	.....	Manual Training		1917	½	3½	.....	1,200	.....
	Wilson, Annie M.....(Int.)	.....	(Household Sci. Instr.)		1917	....	6½	.....	.....	750
Fort William.	Wood, Elmore E.	M.A., McM.	Phys. Cul. (Int.), Math.		1912	13½	2	2,500	.....	.....
	Cornell, Maurice L.	M.A., Queen's	Math.		1910	9	....	.....	2,000	.....
	Madill, Alonzo J.	B.A., McM.	Science		1911	14	3½	.....	2,000	.....
	Parlee, Edith	.....	Art (Int.), Com.		1908	22½	10	.....	.....	1,800
	Grant, Christine C.	B.A., Tor.	Mods. & Hist.		1914	13½	9	.....	.....	1,800
	Ogilvie, Alvin I.	B.A., McM.	Eng.&Hist.,Mods.&H.(Int.)		1914	7½	....	.....	2,000	.....
	Leuty, James H. S.....(Int.)	.....	Phys. Cul.		1915	1½	1½	.....	1,100	.....
	Shepherd, Eleanor M.	M.A., Tor.	Art .....(Int.)	Phys. Cul.	1916	6½	1	.....	.....	1,400
	Breslove, David.....(Int.)	M.A., Tor.	Classics	Phys. Cul.	1916	½	....	.....	1,400	.....
Galt	Gundry, Arthur P.	B.A., Tor.	Science		1914	25½	....	2,500	.....	.....
	Carscadden, Thomas	M.A., Tor.	Eng. and Hist.		1881	41	3	.....	2,000	.....
	Hamilton, Robert S.	M.A., Tor.	Science		1894	27	....	.....	1,750	.....
	Carter, Janet W.	M.A., Tor.	Eng. & H. (Int.), Fr. & Gr.		1901	24	....	.....	.....	1,650
	MacKay, John M.	B.A., Queen's	Math.		1915	10½	7	.....	1,750	.....
	Taylor, William B.	M.A., Tor.	Classics		1915	4½	1½	.....	1,750	.....
	Fleming, Louis C.	.....	.....		1910	12½	6½	.....	1,500	.....
	Keyes, George P.....(Int.)	.....	.....	Phys. Cul.	1916	1	8½	.....	1,300	.....
	Squire, William J.	.....	Com.		1917	3½	3½	.....	1,600	.....
	Elliott, Martha G.....(Int.)	B.A., Tor.	Mods. and Hist.		1915	1½	....	.....	.....	1,100
	Fraser, Lulu B.	.....	Art (Int.)	Phys. Cul.	1916	4½	2½	.....	.....	1,100

	Phelan, Frank J.	.....	Manual Training (Int.)	.....	1916	2½	5	.....	1,500	.....
	Crowe, Greta	.....	(Household Sci. Instr.)	Phys. Cul.	1915	2	....	.....	.....	850
Goderich	Hume, John P.	B.A., Queen's	Science	Agr. & Hor.	1911	25	....	1,800	.....	.....
	Strang, Hugh I.	B.A., LL.D., Tor.	Classics	.....	1871	49½	3	.....	1,250	.....
	Robertson, Alexander M.	M.A., Queen's	Math., Fr. and Ger.	.....	1908	21½	3	.....	1,400	.....
	Clifford, Margaret K.	M.A., B.Pæd., Qu's	Mods. & Hist., Eng. & H.	.....	1912	9½	5	.....	.....	1,300
	Hodge, Gertrude Agnes	B.A., Tor.	.....	.....	1909	8	1	.....	.....	925
	Fraser, Lilian B.	.....	Art (Int.), Com.	.....	1912	5½	½	.....	.....	1,150
	Durnin, Letitia E.	.....	Phys. Cul. (Int.)	.....	1912	4½	5	.....	.....	925
Guelph	Davison, James	B.A., Vic.	Math.	.....	1892	42	2	2,200	.....	.....
	Charlesworth, John W.	B.A., Queen's	.....	.....	1915	26	3½	.....	1,800	.....
	Skinner, Kate C.	B.A., Tor.	Eng., Hist., Fr. & Ger	.....	1895	22	1	.....	.....	1,550
	McNiece, James	B.A., Tor.	Science	.....	1910	21	3	.....	1,800	.....
	Hooper, Arthur G.	M.A., Tor.	Classics	.....	1916	3½	2½	.....	1,800	.....
	Blyth, Sara	.....	Com.	.....	1910	11½	7	.....	.....	1,450
	Hartford, James	.....	.....	.....	1911	6½	3	.....	1,350	.....
	Bennett, Roy F.	B.A., McM.	Phys. Cul.	.....	1913	3½	....	.....	1,350	.....
	Humphries, B. Rowena	.....	Art (Int.)	.....	1913	7	3	.....	.....	1,250
	Robinson, Sadie	.....	.....	Art	1916	6½	2½	.....	.....	1,100
	Kellock, Evelyn D.	B.A., McM.	Eng. and Hist.	.....	1916	3½	....	.....	.....	1,100
	Jones, Captain	.....	(Phys. Cul. Instr.)	.....	1916	....	....	.....	.....	.....
Hamilton	Thompson, Robt. A.	B.A.,Tor.,LL.D., McM	Math.	.....	1885	31	....	3,500	.....	.....
	Turner, John B.	B.A., Queen's	Math., Science	.....	1885	35	3	.....	2,600	.....
	Logan, William M.	M.A., Tor.	Classics	.....	1892	31	....	.....	2,400	.....
	Hogarth, Eber S.	B.A., Tor.	Eng., Fr. and Ger.	.....	1892	28	....	.....	2,400	.....
	Simpson, Benjamin L.	M.A., Queen's	Math.	.....	1905	11½	3	.....	2,200	.....
	Morris, Arthur W.	M.A., Tor.	Classics	.....	1906	12	5	.....	2,100	.....
	Johnston, George L.	B.A., Queen's	Art, Com.	.....	1888	29	3	.....	2,200	.....
	Armstrong, George F.	B.A., Tor.	Math.	.....	1907	14½	1½	.....	2,100	.....
	Morrison, Edward	B.A., Tor.	Science	.....	1907	10½	6	.....	2,000	.....
	Marshall, Charles F.	B.A., Tor.	Science	.....	1909	9½	....	.....	2,000	.....
	Freeman, John A.	B.A., Tor.	Classics	.....	1909	28	....	.....	2,000	.....
	McGee, Cyril H.	B.A., Trin.	Math.	.....	1909	20	....	.....	2,000	.....
	Moffatt, William J.	B.A., Queen's	.....	.....	1909	7¾	12	.....	2,000	.....
	Collins, Herbert E.	B.A., Tor.	Mods. and Hist.	.....	1911	10½	....	.....	1,900	.....
	Robinson, John B.	B.A.,Qu's; B.Pæd.,Tor	Eng. and Hist.	.....	1910	6	24	.....	1,900	.....
	Edwards, John J.	B.A., Queen's	Fr. and Ger.	.....	1911	6½	6	.....	1,700	.....
	Sheppard, Alton M.	B.A., Tor.	Math.	.....	1911	8	2½	.....	1,800	.....
	Price, Charles F.	B.A., Tor. & West	Eng. and Hist.	.....	1913	6	8	.....	1,700	.....
	Beck, Clinton G.	B.A., Queen's	Mds. & H., Fr. & Gr. (Int.)	.....	1914	3½	½	.....	1,600	.....
	Foucar, Walter K.	M.A., Tor.	Eng. & Hist., Fr. & Ger.	.....	1914	21½	....	.....	1,700	.....

List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917—Continued

Collegiate Institutes	Names of Teachers	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. and Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High School or Coll. Inst.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
Hamilton—Con	Pugh, Harry C.....(Int.)	B.A., Tor.....	Science	.....	1915	2 1/12	2 1/12	.....	1,400	.....
	Devitt, S. Girvin.....	B.A., Tor.....	.....	.....	1915	2 2/12	2	.....	1,400	.....
	Edwards, Mabel C.....	.....	.....	Phys. Cul.....	1908	10 2/12	....	.....	.....	1,000
	Hill, Mary A.....	.....	Art .....(Int.)	.....	1909	15	4	.....	.....	1,000
	Taylor, Frederick.....	.....	(Manual Training Instr.).	.....	1916	1/12	3	.....	1,600	.....
Ingersoll.....	Shales, William E.....	M.A., Queen's.....	Science, Phys. Cul.	.....	1914	2 1/12	4	1,700	.....	.....
	Lockett, Horace G. ....(Int.)	M.A., Queen's.....	Classics, Eng. & Hist.....	.....	1916	1/12	2	.....	1,400	.....
	Jackson, Katherine M.....	B.A., Tor.....	Mods. and Hist.....	Phys. Cul.....	1916	7	....	.....	.....	1,100
	Marshall, Marcella T.....	.....	Art (Int.), Com.....	.....	1914	3	5	.....	.....	1,200
	Irving, Jessie C. .....(Int.)	B.A., Tor.....	Math. and Phys.....	Phys. Cul.....	1915	2	....	.....	.....	1,200
	McLeish, Sarah J.....(Int.)	B.A., Queen's.....	Eng. and Hist.....	.....	1916	1 1/12	4	.....	.....	900
	White, Sam. R. (Temp.) (Int)	.....	(Manual Training Instr.).	Man. Train....	1916	1/12	....	.....	950	.....
	Necker, Eloise E.	.....	(Household Sci. Instr.)...	.....	1915	1 1/12	....	.....	.....	550
Kingston.....	Sliter, Ernest O.....	M.A., Tor.....	Classics	.....	1888	29	....	2,200	.....	.....
	Anderson, William G.....	B.A., Tor.....	Eng. and Hist., Classics..	.....	1909	15 1/12	3 1/12	.....	1,900	.....
	Fraser, James W.	B.A., Tor.....	.....	.....	1904	13 1/12	10	.....	1,400	.....
	Saunders, William J.....	M.A.,Qn's, M.S.,Chi..	Science	.....	1908	16 2/12	3	.....	1,900	.....
	Hedley, William P.....	B.A., Tor.....	Math.	.....	1908	12 1/12	8	.....	1,600	.....
	Chase, Reginald M.....	B.A., Tor.....	Classics	.....	1910	11	....	.....	1,600	.....
	Henstridge, Elizabeth	M.A., Queen's.....	Eng., Hist., Fr. & Ger	.....	1907	15 1/12	7	.....	.....	1,500
	Chown, Hattie L.....	.....	.....	.....	1905	12	20	.....	.....	1,000
	Kelly, James W.....	B.A., Queen's.....	.....	.....	1912	4 1/12	15	.....	1,400	.....
	Casselman, Mrs. Cora T.....	B.A., Queen's.....	Eng. and Hist.....(Int.)	.....	1913	3 1/12	3	.....	.....	1,300
	Shurtleff, William M.....	B.A., Queen's.....	Art (Int.), Com.....	.....	1913	7 1/12	8	.....	1,600	.....
	Elliott, Florence M.....(Int.)	B.A., Queen's.....	.....	.....	1915	1 1/12	....	.....	.....	1,000

	Johnston, Agnes E.....(Int.)	B.A., Tor.....	Mods. & Hist.....	.....	1915	1½	....	.....	.....	1,100
	Thompson, Alva E.....(Int.)	B.A., Queen's.....	Math. & Phys.....	.....	1915	1½	....	.....	1,200	.....
	Hitsman, Samuel A.....	.....	Com. .....(Int.)	.....	1916	2½	20	.....	1,300	.....
	Irving, M. Geraldine N.(Int.)	B.A., Queen's.....	.....	.....	1916	½	2	.....	.....	900
	Palmer, George A.....	.....	(Drill Instructor).....	.....	1910	6	....	.....	.....	.....
Kitchener-Waterloo....	Forsyth, David	B.A., Tor.....	Math.....	.....	1901	39½	1	2,000	.....	.....
	Williams, Walter H.	M.A., Queen's	Mods. and Hist.....	.....	1905	12½	....	.....	1,800	.....
	Mallory, Bertha	.....	Com.....	Art, Phys. Cul..	1913	9½	10	.....	.....	1,300
	Pugsley, Edmund	B.A., Vic.....	Science.....	Agr. & Hor....	1909	26	....	.....	1,700	.....
	Kerr, Charles S.	B.A., Tor.....	Classics, Eng. and Hist...	.....	1911	29	....	.....	1,700	.....
	Brown, Harry W.	B.A., Queen's.....	Art .....(Int.)	.....	1905	11½	17	.....	1,600	.....
	Lee, Anna A.	.....	.....	Art	1912	7	4	.....	.....	950
	Barber, Etta L.	.....	.....	.....	1914	4½	5½	.....	.....	950
	Johnson, Walter C.....(Int.)	B.A., Queen's.....	Eng. and Hist.....	.....	1915	1½	2½	.....	1,500	.....
	Houston, Daniel W.	.....	Manual Training	.....	1903	13	18	.....	1,700	.....
	Boyd, Marion K.	.....	(Household Sci. Instr.)...	.....	1914	3	....	.....	.....	900
	Fredenburg, Ford W. (Temp.)	.....	(Phys. Cul. Instr.).....	.....	1917	....	....	.....	.....	.....
	Jones, Stephanie	.....	(Phys. Cul. Instr.).....	.....	1915	1	1	.....	.....	.....
	Hodgins, Nellie K.	.....	(Typewriting).....	.....	1909	7	....	.....	.....	.....
Lindsay.....	Kirkconnell, Thomas A.....	B.A., Queen's.....	Math.	.....	1908	31	3	2,300	.....	.....
	Jennings, Edwin Wm.	B.A., Tor.....	Eng. and Hist.....	.....	1909	14	4	.....	1,800	.....
	Lucas, Gavin A.....	B.A., Tor.....	Com.	Art	1910	14	6	.....	1,800	.....
	Firth, Thomas	M.A., Tor.....	Science	.....	1912	6½	2½	.....	1,800	.....
	Moir, Catherine E.	.....	.....	.....	1908	22½	4	.....	.....	1,200
	Clarke, Walter .....(Int.)	B.A., McM.	Classics	.....	1915	1½	....	.....	1,500	.....
	Bristol, Sadie K.....	B.A., Tor.....	Mods. and Hist.....	.....	1915	6	....	.....	.....	1,500
	Barlow, Fred. J.....(Int.)	B.A., Tor.....	Art	.....	1915	2½	2	.....	1,500	.....
	Morley, Dollie .....(Int.)	.....	Com. (Int.), Phys. Cul....	.....	1915	1½	8	.....	.....	1,000
	Erb, Maurice .....(Int.)	B.A., Queen's.....	Eng. and Hist.....	.....	1916	½	5	.....	1,400	.....
	Johnson, Alfred .....(Int.)	B.A., Queen's.....	.....	Phys. Cul.....	1916	½	....	.....	1,200	.....
London.....	Rogers, George F.....	B.A., Vic.....	Science	.....	1913	23	....	3,000	.....	.....
	MacDonald, George L.	B.A., Tor.....	Eng., Fr. and Ger.....	.....	1908	24	7	.....	2,050	.....
	McKellar, Herbert S.	B.A., Tor.....	Fr. and Ger.....	.....	1909	21½	....	.....	2,000	.....
	Dickenson, James A.....	.....	Com.	.....	1895	30	4	.....	2,000	.....
	Riddell, Frank P.	B.A., Tor.....	Classics	.....	1898	27	....	.....	2,000	.....
	Mooney, Wm. H. T.....	B.A., Tor.....	Classics	.....	1903	14½	6	.....	1,950	.....
	Gray, Neil R.	B.A., Tor.....	Mods. and Hist.....	.....	1904	13½	3	.....	1,950	.....
	Cameron, John H.....	.....	.....	.....	1911	18	9	.....	1,900	.....
	Buchanan, John A.	B.A., Queen's.....	Com.	.....	1907	15½	3	.....	1,900	.....
	Walker, Arthur J.....	B.A., Queen's.....	Com.	.....	1908	13	8	.....	1,900	.....
	Calvert, Joseph F.....	M.A., McM.....	Science	.....	1909	12	1½	.....	2,000	.....
	Martin, Stephen	B.A., Tor.....	Math.	.....	1912	30½	3½	.....	2,000	.....

List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917—Continued

Collegiate Institutes	Names of Teachers	Degrees	Specialists	Elementary and Intermediate Certificate (In the case of Agr. and Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High School or Coll. Inst.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
London—Con..	Bluett, Claude K.	B.A., Queen's			1912	4½	14	.....	1,800	.....
	Kelso, Alice C.	.....	.....	.....	1897	21½	21½	.....	.....	1,400
	Winnett, Violet E.	B.A., Western	.....	.....	1912	4½	23	.....	.....	1,400
	Firth, Joseph W.	B.A., Tor.	Science	.....	1914	9	2	.....	2,000	.....
	Houser, Wilfred H.	M.A., Queen's	Math.	.....	1914	7	...	.....	1,900	.....
	Menhennick, Ada M.	B.A., McM.	Mods. and Hist. (Int.)	.....	1914	4½	3½	.....	.....	1,400
	McCamus, Bessie	B.A., Tor.	Eng. and Hist., Art (Int.)	.....	1913	7	...	.....	.....	1,400
	Nash, Mary V. (Int.)	B.A., Queen's	Phys. Cul.	.....	1914	21½	21½	.....	.....	1,400
	Blake, Richard J.	.....	Com. (Int.)	.....	1915	8½	...	.....	1,700	.....
	Oates, Thomas W.	.....	Com.	.....	1915	5½	2	.....	1,700	.....
	Parker, Mrs. F. Gray	B.A., Tor.	Eng. and Hist. (Int.)	.....	1915	4	...	.....	.....	1,500
	Young, Ralph H.	B.A., Queen's	.....	.....	1916	4	3	.....	1,500	.....
	Adams, William A.	.....	Manual Training... (Int.)	.....	1917	7	20	.....	1,750	.....
	Davidson, S. Kelso	.....	(Art Instructor)	.....	1887	36	...	.....	900	.....
	MacPherson, Mary C.	B.A., Queen's	(Household Sci. Instr.)	.....	1908	14	...	.....	.....	1,500
	Syme, J. J.	.....	(Drill Instructor)	.....	1916	...	...	.....	.....	.....
Morrisburg....	Elliott, Thomas E.	B.A., Tor.	Fr. and Ger.	.....	1914	28	....	1,800	.....	.....
	Boyd, Annie A.	M.A., Queen's	Com., Science	.....	1907	12½	8	.....	.....	1,500
	Pringle, Gertrude	B.A., Tor.	Art (Int.), Classics	.....	1912	11½	½	.....	.....	1,400
	Morrison, Selkirk A.	B.A., Queen's	Eng. and Hist.	Phys. Cul.	1915	14½	4	.....	1,400	.....
	Campbell, Alexander	B.A., Tor.	Math.	.....	1916	25½	3	.....	1,400	.....
Napanee.....	Maclean, Godwin V.	M.A., Tor.	Math.	.....	1913	24	1½	1,700	.....	.....
	Smith, Thomas C.	B.A., Queen's	Science	.....	1917	17	14	.....	1,500	.....
	Bain, Mary	B.A., Tor.	Mods.&H., Phys.Cul. (Int.)	.....	1914	4	...	.....	.....	1,150
	Baker, Sarah J.	.....	Com.	Phys. Cul.	1914	11½	2½	.....	.....	1,200
	Locklin, Elva J.	B.A., Tor.	Art (Int.)	.....	1913	3	4	.....	.....	975

	Evans, George E.	B.A., Tor.	Classics	Phys. Cul.	1915	3½			1,600	
	Unger, Delbert B. (Int.)		Phys. Cul.		1915	2	2		1,000	
Niagara Falls	Dickson, James D.	B.A., Tor.	Math.		1893	29	3	2,300		
	Walker, David M.		Com.		1893	27	16		1,800	
	Will, George E.	B.A., Tor.	Classics		1901	17	3		1,800	
	Logan, Jessie M.	B.A., Tor.	Mods. and Hist.		1907	9½				1,500
	Norrish, Vera E.	B.A., Queen's			1913	5½	⅝			1,400
	Bielby, George H.	B.A., Tor.	Science		1913	9½	7		1,800	
	Agla, Mildred A.		Art (Int.)		1915	6½	2			1,450
	Quarry, Vincent C. (Int.)	B.A., Tor.	Phys. Cul.		1916	1½			1,450	
	Howson, Alexandra A.	B.A., Queen's	Phys. Cul., Fr. & Gr. (Int.)		1916	7	2			1,400
North Bay	Brown, Percy W.	B.A., Queen's	Science		1913	23	4	2,400		
	Wallace, Frank D.	M.A., Queen's	Math.		1913	6½			1,850	
	Bottoms, Emma M.		Art (Int.), Com.		1914	4½	9			1,300
	Farmer, Bessie S. (Int.)	B.A., McM.	Mods. & Hist., Phys. Cul.		1916	½	1			1,100
	Mackintosh, Helen	M.A., Queen's	Fr. and Ger.		1916	6½				1,300
	Affleck, Elsie	M.A., Tor.	Classics	Phys. Cul.	1916	3½				1,350
	King, Eva W.	B.A., Tor.	Phys. Cul. (Int.)		1916	2½				1,200
Orillia	Lillie, John T.	B.A., Vic.	Classics		1910	29½		1,900		
	Doidge, Thomas Clarke	B.A., Tor.	Math., Com.		1899	23	8		1,600	
	McGill, David H.	M.A., Queen's	Science		1914	5	3½		1,600	
	Watterworth, Grace M.		Com.		1914	15½	2			1,300
	Kells, Emma M.	M.A., Tor.	Mods. and Hist.	Art, Phys. Cul.	1914	4				1,050
	de Guerre, Laura B.	B.A., Tor.	Mods.&Hist. (Int.), Fr.&Ger.	Phys. Cul.	1914	2½				1,050
	Clark, Ira E.		Phys. Cul (Int.)	Com.	1906	10½	7		1,250	
	McNeil, William G. (Int.)	B.A., Queen's	Eng. and Hist.		1915	1½	3½		1,250	
	Hall, Henry W.				1915	3½			950	
Ottawa	McDougall, Alex. H.	B.A., Tor.; LL.D., Qn's	Math.		1889	33		3,500		
	Marty, Aletta E.	M.A., Queen's	Fr. and Ger.		1903	22	3			2,400
	Norris, Isaac T.	B.A., Queen's	Math.		1898	21			2,400	
	Hardie, William	B.A., Tor.	Classics		1905	25			2,400	
	Stothers, Robert	B.A., Queen's			1887	30	8		2,300	
	Hood, Finlay		Com. (Int.), Art		1906	12	7		2,200	
	Simpson, Robert S.	B.A., Queen's	Com.		1903	18	9		2,300	
	Smeaton, William	B.A., Tor.	Science		1906	16½	1½		2,000	
	Stevenson, William J.				1906	26	8		2,000	
	Tomkins, Elizabeth A.				1902	14½	19			1,800
	McManus, Emily	M.A., Queen's	Eng. and Hist.		1906	21	3½			1,800
	Mann, Harry C.	B.A., McM.			1907	9½	6		2,000	
	Graham, William A.	B.A., Tor.			1908	18½	3		2,000	
	Kaiser, Jesse B.				1909	23	4		2,000	

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								Principal	Male Assistants	Female Assistants
								$	$	$
Ottawa—Con..	Muir, Jessie	M.A., Queen's	Fr. and Ger.		1909	7½	8	.....	.....	1,700
	Mabee, George E.	B.A., Tor.	Classics, Fr. and Ger.		1910	23¼	....	.....	2,000	.....
	Lane, James S.	B.A., Tor.	Fr. and Ger.		1911	20	....	.....	2,000	.....
	Stewart, George B.	B.A., Queen's	Math.		1911	7½	2	.....	1,900	.....
	Gilchrist, Dugald A.	B.A., B.Pæd., Tor.	Eng. and Hist.		1912	11½	7	.....	2,200	.....
	Donaldson, William	B.A., Tor.	Science		1912	16	5½	.....	1,900	.....
	Smith, Henry L.	.....	Com.	(Int.)	1912	7	6½	.....	1,800	.....
	Ellis, Oscar Fred. W.	B.A., Tor.	.....		1913	3½	....	.....	1,700	.....
	Curtis, Jeremiah T.	.....	.....		1913	3½	15	.....	1,600	.....
	Howie, James R.	.....	.....		1914	3½	....	.....	1,500	.....
	Anderson, Frank C.	B.A., M.D., C.M., Qn's.	Science, Com.		1914	11½	5	.....	2,000	.....
	Readdie, George	B.A., McM.; M.A., Ed.	Fr. and Ger.		1914	3½	....	.....	1,600	.....
	Latour, Charles A.	B.A., Laval	.....		1914	2½	1	.....	1,400	.....
	Stuart, Frederic A.	M.A., Tor.	Science		1915	21	....	.....	1,900	.....
	Batstone, A. Thomas	.....	.....		1915	6½	1½	.....	1,500	.....
	MacMinn, Marie	(Int.) B.A., Queen's	Mods. & Hist., Phys. Cul.		1915	1½	....	.....	.....	1,100
	Gilhooly, Beatrice C.	(Int.) B.A., Queen's	Eng. and Hist.		1915	1½	....	.....	.....	1,100
	Hills, Minnie B.	B.A., Tor.	Math.		1916	15	....	.....	.....	1,600
	Johnston, Agnes M.	.....	Art (Int.), Com.		1916	13	2	.....	.....	1,500
	Burridge, Arthur A.	(Int.) B.A., McM.	Phys. Cul.		1916	½	....	.....	1,400	.....
	MacKay, Donald A.	B.A., Queen's	Science		1916	15½	5	.....	1,800	.....
Owen Sound...	Merritt, Robert N.	B.A., Tor.	Math.		1916	17	1½	2,000	.....	.....
	Packham, James H.	B.A., Vic.	Math., Com.	Art	1884	33½	2	.....	1,750	.....
	Brown, Lyman	M.A., Tor.	Classics		1903	19½	1½	.....	1,750	.....
	Elmslie, Wallace	B.A., Tor.	Mods. and Hist.		1909	15½	....	.....	1,750	.....
	Robertson, George A.	B.A., Tor.	Science		1909	12½	5	.....	1,750	.....

	Whitely, Lester R.	B.A., Tor.	Mods. and Hist.		1910	14½	....	.....	1,750	.....
	Dowkes, William J.	.....	Phys. Cul. (Int.)	.....	1903	13	12	.....	1,250	.....
	Edwards, Grace	M.A., Tor.	Mods. and Hist. (Int.)	Phys. Cul.	1909	8½	....	.....	.....	1,300
	McKellar, John (Int.)	B.A., Tor.	Math. and Phys.	.....	1915	1½	....	.....	1,300	.....
	Oldham, Ida M.	B.A., Tor.	Phys. Cul. (Int.)	.....	1916	2½	1½	.....	.....	1,000
	Stollery, Edith (Int.)	B.A., Tor.	Art	.....	1916	1	....	.....	.....	900
	Pritchard, Frances P.	.....	(Household Sci. Instr.)	.....	1906	10	....	.....	.....	850
	Mann, William S.	.....	(Manual Training Instr.)	.....	1912	4	5	.....	1,300	.....
Perth	Marlin, Lewis A.	M.A., Queen's	Science	.....	1910	9	7	1,850	.....	.....
	Challen, Newton E.	B.A., McM.	Phys. Cul. (Int.), Math.	.....	1913	6½	3	.....	1,600	.....
	Cowan, Margaret T.	B.A., Tor.	Classics	.....	1910	10½	....	.....	.....	1,400
	McRae, Donella M.	B.A., Queen's	Mods. and Hist.	.....	1912	12½	2	.....	.....	1,300
	Walker, Helen C.	B.A., Queen's	.....	Phys. Cul.	1911	5½	....	.....	.....	1,000
	White, Kate E.	.....	Art (Int.), Com.	.....	1916	11	1	.....	.....	1,300
Peterborough	Kenner, Henry R. H.	B.A., Tor.	Classics	.....	1893	28½	½	2,400	.....	.....
	Fessenden, Cortez	M.A., Trin.	Math.	.....	1890	41	3	.....	1,900	.....
	Pettit, Louis J.	B.A., Queen's	Eng. and Hist.	.....	1908	11½	3	.....	1,900	.....
	Jamieson Clinton E.	B.A., Queen's	Com.	Phys. Cul.	1911	12½	1	.....	1,815	.....
	Morris, Francis J. A.	M.A., Tor.; B.A., Oxon.	Classics	.....	1913	6	....	.....	1,750	.....
	McBride, Sara M.	.....	Art (Int.)	Phys. Cul.	1913	15	....	.....	.....	1,450
	Hone, Arthur D.	B.A., Tor.	Phys. Cul. (Int.), Science	.....	1914	4½	2	.....	1,810	.....
	Browne, Carl S.	M.A., McM.	Math. and Phys.	.....	1914	3½	....	.....	1,750	.....
	Henry, V. Roland	M.A., Queen's	Science	.....	1914	2½	....	.....	1,750	.....
	Williams, Mary I.	B.A., Queen's	Mods. and Hist.	.....	1915	10½	....	.....	.....	1,750
	Graham, Samuel J. (Int.)	B.A., McM.	.....	.....	1916	1	....	.....	1,350	.....
	Wallace, Muriel J. W. (Int.)	B.A., Tor.	Mods. & Hist., Phys. Cul.	.....	1917	1½	....	.....	.....	1,600
Picton	Kerfoot, Horace W.	B.A., Queen's	Classics	.....	1915	12	11	2,000	.....	.....
	Bigg, Edmund M.	M.A., Tor.	Science	.....	1906	43	....	.....	1,300	.....
	Solmes, Harriette M.	B.A., Queen's	.....	.....	1912	9	1½	.....	.....	1,100
	Hewitt, Cora E.	B.A., Tor.	Phy.Cul. (Int.), Mods. & H.	.....	1913	4½	2½	.....	.....	1,300
	Reid, Edith L.	.....	Art. (Int.), Com.	Art	1916	8½	6½	.....	.....	1,200
	Zavitz, Arthur S.	B.A., Queen's	Math.	Phys. Cul.	1915	8½	3½	.....	1,500	.....
	Gulston, Chas. S.	.....	Phys. Cul. (Int.)	Agr. & Hor.	1914	2½	2	.....	1,100	.....
Port Arthur	Howell, William B. L.	B.A., Tor.	Classics	.....	1904	19	....	2,400	.....	.....
	Cranston, David L.	B.A., Tor.	Math.	.....	1907	13	....	.....	2,000	.....
	Rosevear, Howard S.	B.A., Tor.; M.A., Harv.	Com. (Int.), Science	.....	1910	21	....	.....	2,000	.....
	Aitchison, Belle	.....	Art (Int.)	.....	1903	22	3	.....	.....	1,400
	Bartlett, Cora	.....	Com.	.....	1912	6½	6½	.....	.....	1,600
	Trenaman, Mabel N.	B.A., Tor.	Phys. Cul. (Int.), Mods. & H.	.....	1916	14½	....	.....	.....	1,400
	Schofield, Ada Ethel I. (Int.)	B.A., Tor.	Household Science	.....	1916	½	....	.....	.....	900
	Arnold, Chas. H. (Int.)	.....	(Manual Training Instr.)	Phys. Cul.	1916	½	3	.....	1,500	.....

List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917—Continued

Collegiate Institutes	Names of Teachers	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. and Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High School or Coll. Inst.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
Renfrew	Bryan, Hugh W.	M.A., Queen's	Classics		1907	19½	....	2,000	.....	.....
	Baird, Alex. W.	M.A., Queen's	Eng., His., Fr. and Ger.		1908	8½	....	.....	1,700	.....
	Macdonald, Fred. J.	M.A., Tor.	Math. and Phys.	Art., Phys.Cul.	1916	2½	3	.....	1,600	.....
	Hay, William D. (Int.)	B.A., Queen's	Science	Agr. & Hor.	1916	2½	2	.....	1,250	.....
	Corkery Florence	M.A., Queen's	Art (Int.), Eng. & Hist.		1910	9	3	.....	.....	1,350
	Fritz, Olive E.		Com.		1913	6	....	.....	.....	1,250
	Scott, Rena C.				1915	5½	2	.....	.....	1,250
	McGregor, Pearl			Phys. Cul.	1912	4½	3½	.....	.....	1,050
	Kilpatrick, Jessie S.	B.A., Queen's	Phys. Cul. (Int.)		1916	3½	1½	.....	.....	1,100
	Cameron, James		Phys. Cul. (Int.)		1916	2½	1	.....	1,100	.....
Ridgetown	MacLaurin, James L.	B.A., McM.	Science	Phys. Cul.	1913	5	....	1,600	.....	.....
	Lawr, Melvin J. (Int.)	M.A., Queen's	Math.		1917	5½	3	.....	1,350	.....
	Ford-Firby, Mrs. Emma		Com.		1913	7½	4	.....	.....	1,000
	Dewar, Nora G. (Int.)	B.A., Queen's	Classics		1915	1½	....	.....	.....	1,000
	Nicholson, Elvira E. (Int.)	M.A., Tor.	Mods. and Hist.	Phys. Cul.	1916	2	....	.....	.....	900
St. Catharines	Coombs, Albert E.	M.A., B.Pæd., Tor.	Classics		1909	24½	....	2,000	.....	.....
	Odlum, Eleanor D.	B.A., Trin.	Mods. and Hist.		1907	13½	1	.....	.....	1,700
	Carefoot, George A.	B.A., B.Pæd., Qn's.	Science		1911	20	5½	.....	1,800	.....
	Anderson, Lillie C.		Com.		1912	13	3	.....	.....	1,450
	Lauder, Beatrice G.	M.A., Queen's	Eng and Hist. (Int.)		1912	5	....	.....	.....	1,400
	Hartford, Leo				1912	5	½	.....	1,250	.....
	Taylor, Wilson	B.A., Tor.	Math.		1914	31	2½	.....	1,750	.....
	Fitzgerald, Eliza. S.	M.A., Queen's	Classics		1914	32½	....	.....	.....	1,100
	MacKenzie, Eva F.		Art		1914	8½	9½	.....	.....	1,200
	Jenner, Madeline M.	B.A., Tor.	Phys. Cul.		1914	2½	....	.....	.....	1,100
	Brackenbury, George L.			Phys. Cul.	1914	4½	1	.....	1,250	.....
	Poirier, Mary H.				1916	2½	1	.....	.....	950

St. Mary's ...	Haydon, Wm. James .....**	M.A., McM.	Science	Phys. Cul....	1911	5½	....	1,700	.....	.....
	Bocking, William R.	M.A., Tor.	Math. and Phys.	Phys. Cul....	1913	4½	1	.....	1,600	.....
	Whitney, Viola L. ....(Int.)	B.A., Tor.	Eng. & Hist., Mods. & H...	Phys. Cul....	1916	2½	½	.....	.....	1,200
	Colbeck, Marjorie M. ..(Int.)	B.A., Tor.	Classics	Phys. Cul....	1916	2½	....	.....	.....	1,200
	Matthews, Herbert L...(Int.)	B.A., McM.	Phys. Cul.	.....	1914	3	....	.....	1,100	.....
	MacGregor, Mrs. Jeanette E..	.....	Art. (Int.), Com.	.....	1913	7	4	.....	.....	1,300
	Rogers, Mary E. V.	.....	.....	Phys. Cul....	1913	3½	4	.....	.....	800
St. Thomas...	Voaden, Arthur C.	M.A., Queen's.....	Eng. & Hist., Com.	.....	1903	22	2	2,200	.....	.....
	Cook, Margaret	M.A., Tor.	Eng., His., Fr. & Ger.	.....	1903	21	....	.....	.....	1,700
	Liebner, Ernest O.	B.A., Queen's	Science	.....	1909	23	....	.....	1,800	.....
	Gray, George L.	B.A., Tor.	Eng. & Hist.	.....	1909	9½	....	.....	1,700	.....
	Henderson, James V.	B.A., Tor.	Classics	.....	1910	14	3	.....	1,700	.....
	Wing, Henry	.....	.....	.....	1908	9	9	.....	1,400	.....
	McEachern, John G.	B.A., Queen's	Eng. and Hist.	.....	1909	8½	4½	.....	1,700	.....
	Thomas, Neil J.	.....	Art	.....	1910	7	7½	.....	1,700	.....
	Berney, Laura J.	B.A., Queen's	.....	.....	1911	9½	....	.....	.....	1,400
	Wilkinson, James E.	B.A., Tor.	Com.	.....	1913	7	3	.....	1,700	.....
	Stone, Alice B.	.....	Com.	.....	1913	14½	8	.....	.....	1,600
	Skirrow, William A.	M.A., Queen's	Math.	.....	1914	6½	....	.....	1,700	.....
	Tanner, Alice M.	.....	Com.	.....	1915	4½	1½	.....	.....	1,400
	Coulter, Eva M.	B.A., Queen's	Eng. and Hist. .....(Int.)	.....	1915	3½	5½	.....	.....	1,000
	Palmer, Ethel M.	.....	Household Science	.....	1914	3	5½	.....	.....	900
	Thompson, Chas. D....(Int.)	.....	(Manual Training Instr.) .	.....	1915	2	....	.....	1,100	.....
	Beeson, Lieut.	.....	(Drill Instr.)	.....	1916	....	....	.....	.....	.....
Sarnia	Overholt, Arthur M.	M.A., McM.	Math.	.....	1913	15½	½	2,400	.....	.....
	Grant, David M.	B.A., Tor.	Classics	.....	1885	33	....	.....	1,850	.....
	Dent, William A.	.....	Science	.....	1904	19	2	.....	1,850	.....
	Story, Gladys G.	M.A., Queen's	Mods. and Hist.	Phys. Cul.	1915	14	....	.....	.....	1,650
	Campbell, Minnie M.	.....	Art. (Int.), Com.	.....	1912	9½	10½	.....	.....	1,300
	Cruickshank, Libbie	.....	Com. (Int.)	.....	1913	11½	5	.....	.....	1,300
	Phillips, Fred S.	.....	.....	Phys. Cul.	1915	4½	....	.....	1,200	.....
	Campbell, Lillian.....(Int.)	B.A., Tor.	Mods. and Hist.	.....	1915	1½	....	.....	.....	1,350
	Harvey, Martha	B.A., Tor.	Phy.Cul.(Int.),Math.&Phy.	.....	1916	11	....	.....	.....	1,350
Seaforth	Ross, John F.	M.A., Tor.	Math. & Phys., Phys. Cul..	.....	1913	3½	2½	1,800	.....	.....
	Hazen, Arthur C. .....(Int.)	M.A., Tor.	Science	Phys. Cul.	1915	1½	3½	.....	1,400	.....
	McKinley, Clara B.	B.A., Tor.	Classics	.....	1916	6½	....	.....	.....	1,200
	Weatherill, Helen E. M.	.....	Art. (Int.), Com.	.....	1914	5½	1	.....	.....	1,100
	Allen, Mabel E.	B.A., Tor.	Mods. & Hist.	.....	1915	11	....	.....	.....	1,100
	Helson, Margaret J. ...(Int.)	M.A., Tor.	Mods. & Hist.	Phys. Cul.	1915	1½	....	.....	.....	900

**Acting Principal during the absence of W. J. Wright—on Active Service.

List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917—Continued

Collegiate Institutes	Names of Teachers	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. and Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High School or Coll. Inst.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
Smith's Falls	Rose, Robert C.	B.A., Tor.	Math.		1907	25	3½	1,950	.....	.....
	Burns, Charles J.	B.A., Queen's	Classics		1912	7½	....	.....	1,600	.....
	McWhorter, Mary V.	B.A., Tor.	Mods. and Hist.		1916	7	....	.....	.....	1,400
	Bunton, George W.	B.A., Queen's	Science	Agr. and Hor.	1916	5½	4	.....	1,600	.....
	McCallum, Mary (Int.)	B.A., Queen's	Eng. and Hist.	Phys. Cul.	1916	1½	4½	.....	.....	1,000
	Ryan, Mae H. (Int.)	B.A., Queen's	.....	.....	1915	1½	....	.....	.....	900
	Keegan, Joseph D.	.....	Com. (Int.)	.....	1917	11½	13	.....	1,300	.....
	Burns, Grace (Int.)	B.A., Tor.	Art	.....	1916	1½	....	.....	.....	1,000
	Ferguson, William T.	.....	Phys. Cul. (Int.)	(Mn. Tr. Inst.)	1912	5	12	.....	1,600	.....
	Kennedy, Catharine (Int.)	.....	(Household Sci. Instr.)	.....	1915	1½	6½	.....	.....	700
Stratford	Mayberry, Charles A.	B.A., LL.B., Tor.	Classics	.....	1891	33	2	2,300	.....	.....
	Malcolm, George	B.A., Queen's	Eng. and Hist.	.....	1890	32	6	.....	1,750	.....
	Sprung, Whitfield L.	B.A., Tor.	Math. and Phys.	.....	1908	13	5	.....	1,900	.....
	Marty, Sophie E.	M.A., Queen's	Eng., Hist., Fr. and Ger.	.....	1900	24	3	.....	.....	1,750
	McMillan, William J.	B.A., Tor.	Science	.....	1912	7½	5	.....	1,700	.....
	McQueen, Rose J.	B.A., Tor.	Eng. and Hist.	.....	1912	9	1	.....	.....	1,650
	Taylor, Daisy E.	.....	.....	.....	1914	11	4½	.....	.....	1,150
	Doherty, Mabel	.....	Com.	Art	1908	14	2	.....	.....	1,300
	Murday, Arthur M. (Int.)	.....	.....	.....	1914	5½	8	.....	1,400	.....
	McCrimmon, Leon R.	M.A., McM.	.....	.....	1914	2½	....	.....	1,200	.....
	Steele, Walter S. (Int.)	.....	.....	.....	1916	1	7½	.....	1,400	.....
	Plummer, Phyllis F. (Int.)	M.A., Tor.	.....	Phys. Cul.	1916	1	....	.....	.....	1,000
	Davis, Irene P.	B.A., Tor.	Art. (Int.)	Phys. Cul.	1916	2½	3	.....	.....	1,000
	Tench, Franklin J.	.....	(Manual Training Instr.)	.....	1913	3½	....	.....	1,600	.....
	Miller, Beulah	.....	(Household Sci. Instr.)	.....	1914	2½	8	.....	.....	850

Strathroy	Sexton, James H.	M.A., Queen's	Science	.....	1914	20	9	2,000	.....	.....
	Althouse, John G.	B.A., Tor.	Phys. Cul., Class	.....	1913	3½	....	.....	1,600	.....
	Henry, Elizabeth C.	B.A., Queen's	Fr. & Ger., Mods. & Hist..	.....	1913	7½	13	.....	.....	1,250
	Sadleir, Mrs. Leah B. J.....	M.A., Tor.	Math.	.....	1910	9½	....	.....	.....	1,250
	Martyn, Tena .....(Int.)	.....	Art	.....	1916	½	1	.....	.....	1,000
	Pirie, Lizzie .....(Int.)	.....	Com.	Phys. Cul.	1916	½	1	.....	.....	800
Toronto, Harbord St..	Hagarty, Edward W.	M.A., Tor.	Classics	.....	1892	33	....	3,200	.....	.....
	Lawler, Gertrude	M.A., Tor.	Eng., Fr. & Ger., Math.	.....	1892	25	....	.....	.....	2,400
	Glassey, David A.	B.A., Tor.	Classics	.....	1906	22½	....	.....	2,400	.....
	Wightman, Robert	B.A., Tor.	Math.	.....	1908	19	....	.....	2,400	.....
	Ivey, Thomas J.	M.A., Tor.	Science	.....	1909	20½	....	.....	2,400	.....
	Irwin, Herbert W.	B.A., Tor.	Mods. and Hist.	.....	1915	15	....	.....	2,400	.....
	Ayers, M. Huntley	M.A., Queen's	Science	.....	1911	12½	8	.....	2,200	.....
	Fraser, Charles G. (Jr.)	M.A., Tor.	Science	.....	1910	6½	....	.....	2,000	.....
	Carlyle, John A.	B.A.,Tor.; M.A.,Harv.	Eng. and Hist.	Phys. Cul.	1911	7	2	.....	2,000	.....
	Hawkins, Maud M.	B.A., Tor.	Eng., Hist., Fr. & Ger. ...	.....	1911	16	....	.....	.....	2,100
	Knight, Carrie M.	M.A., Tor.	Class., Eng. & Hist.	.....	1913	7½	....	.....	.....	1,900
	Young, Edmund T.	.....	.....	.....	1911	10	20	.....	2,200	.....
	Adams, John H.	B.A., Tor.	Phys. Cul. .....(Int.)	.....	1913	8½	....	.....	2,000	.....
	Corbett, Lewis H.	M.A., Tor.	Mods. and Hist.	.....	1913	3½	....	.....	1,900	.....
	Kent, Eleanor	.....	Art. (Int.), Com.	.....	1913	18	2½	.....	.....	1,900
	Robinson, Frances	B.A.,Tor., M.A., Col..	Eng. and Hist.	.....	1915	5½	2½	.....	.....	1,800
	Rochat, Mrs. Norma M.	M.A., Tor.	Mods. and Hist.	Phys. Cul.	1914	7	....	.....	.....	1,900
	Bell, Elizabeth E. L.*.. (Int.)	B.A., Tor.	Math.	.....	1916	1½	....	.....	.....	1,400
	Sanderson, Oliver N.** (Int.)	B.A., Tor.	.....	.....	1916	1	....	.....	1,400	.....
	Asbury, Frank C. ....(Int.)	M.A., Tor.	Math. and Phys.	.....	1917	1½	....	.....	1,400	.....
Toronto, Humberside.	Colbeck, Franklin C.	B.A., Vic.	Classics, Eng.	.....	1894	30	1½	3,200	.....	.....
	Gourlay, Richard	B.A., Tor.	Classics, Math.	.....	1893	30	....	.....	2,400	.....
	Charles, Henrietta	B.A., Tor.	Eng., Fr. and Ger.....	.....	1901	30	....	.....	.....	2,400
	Johnston, Frederick J .	M.A., Tor.	Science	.....	1904	19	3	.....	2,400	.....
	Bennett, John S.	B.A., Tor.	Classics	.....	1909	8½	6	.....	2,100	.....
	Jermyn, Percy T.	M.A., Tor.	Eng. and Hist.	.....	1915	15	2	.....	2,400	.....
	Stewart, Kate L.	B.A., Tor.	Eng. and Hist.	Phys. Cul....	1911	9	½	.....	.....	1,900
	Morrow, John D.	B.A., Tor.	Classics	Phys. Cul....	1913	20½	....	.....	1,900	.....
	Patterson, Arnott M.	M.A., Queen's	Science	.....	1913	8½	½	.....	2,000	.....
	Clarke, Bruce W.	B.A., McM.	Sci. (Int.) Phy. Cul. Math..	.....	1913	5½	....	.....	1,800	.....
	Barr, Annie E.	B.A., Tor.	Mods., and Hist.....	Phys. Cul....	1913	4½	....	.....	.....	1,700
	Colbeck, Wilhelmina L.	B.A., Tor.	Mods., and Hist.....	Phys. Cul....	1913	4½	....	.....	.....	1,700
	McQuarrie, Ernest C.	B.A., Tor.	Phys. Cult. .....(Int.)	.....	1915	4½	....	.....	1,600	.....
	McDiarmid, Janetta N. (Int.)	M.A., Tor.	Math.	.....	1915	4	....	.....	.....	1,500
	Hatch, Salem B.	.....	Art, Com.	.....	1909	12	8	.....	2,200	.....
	Evans, William A.	.....	.....	.....	1904	12½	20	.....	2,200	.....

*In place of Walter J. Lamb—on Active Service.

**In place of S. P. Griffin—On active service.

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								Principal	Male Assistants	Female Assistants
								$	$	$
Toronto. Jarvis.....	Jeffries, John	B.A., Tor.	Eng., Hist., Fr. & Ger....	.....	1907	29	1	2,700	.....	.....
	Lougheed, William J.	M.A., Tor.	Math.	.....	1907	13½	3½	.....	2,400	.....
	Jennings, William A.....	B.A., Tor.	Science	.....	1907	10½	....	.....	2,200	.....
	Hardy, Edwin A.	B.A., D.Pæd., Tor....	Eng., Fr. and Ger.....	.....	1910	26	....	.....	2,100	.....
	Thomas, Janie	M.A., Tor.	Eng. and Hist.	.....	1882	34½	1	.....	.....	2,200
	Halbert, Edwin J.	B.A., Tor.	Science	.....	1910	7½	3	.....	2,000	.....
	Murdoch, William E.	B.A., Tor.	Classics	.....	1910	6½	16	.....	2,100	.....
	Barnes, Charles H.	.....	Phys. Cul.	.....	1910	6½	16	.....	2,100	.....
	O'Connell, Marguerite E. ...	B.A., Queen's	E. & H.,Ph.C. (Int.), F. & G.	.....	1908	8½	3	.....	.....	2,100
	Tapscott, Harry B.	M.A., McM. & Harv..	Fr. and Ger.....	.....	1912	12	6½	.....	2,400	.....
	Milburn, Clement A.	B.A., Tor.	Math.	.....	1912	8½	....	.....	1,800	.....
	Durie, Helen F.	M.A., Tor.	Phys. Cul. .....(Int.)	.....	1913	3½	....	.....	.....	1,800
	Barnes, Charles L.	B.A., Tor.	Classics	.....	1913	14	4½	.....	2,400	.....
	Allin, Arthur E. .....(Int.)	M.A., Tor.	Art	.....	1913	3½	....	.....	1,700	.....
	Smith, Arthur F.	B.A., McM.	.....	.....	1914	6½	....	.....	1,700	.....
	Spence, Ruth E.	B.A., Tor.	Mods. & H.,Phys. Cul.(Int.)	.....	1915	2½	....	.....	.....	1,500
Toronto. Malvern Ave	Lehmann, Carl A. K.	B.A., Tor.	Science	.....	1910	21	2	3,200	.....	.....
	Horton, Charles W.	B.A., Queen's	Art (Int.), Eng. & Hist...	.....	1911	23	7	.....	2,400	.....
	Graham, Louis H.	M.A., Tor.	Science	.....	1912	17	5	.....	2,400	.....
	Lingwood, Frederick H.	M.A., Tri.,D.Pæd.,Qns	Classics	.....	1910	24	....	.....	2,200	.....
	Barr, Lydia A.	B.A., Tor.	Mods., and Hist.....	.....	1908	24	9	.....	.....	2,150
	Dafoe, Helen I.	B.A., Tor.	Phys. Cul. (Int.), Mds. & H.	.....	1914	4½	....	.....	.....	1,800
	Clarke, Lorne H.	B.A., McM.....	Ph. Cl.(Int.), Math. & Phys.	.....	1914	2½	....	.....	1,700	.....
	MacKenzie, Ken'th A..(Int.)	B.A.Sc. Tor.	.....	.....	1915	3	2½	.....	1,400	.....
Toronto, Oakwood ...	Gray, Robert A.	B.A., Tor.	Math.	.....	1910	32	....	3,200	.....	.....
	Clarke, Frederick H.	B.A., Tor.	Eng. & Hist., Fr. & Ger...	.....	1908	21	....	.....	2,400	.....

	Kennedy, Thomas	M.A., Queen's	Math.		1908	17	2¾		2,400		
	Jewett, Albert E.	B.A., Queen's	Science		1908	29	3½		2,400		
	Brown, Harry W.	B.A., Tor.	Eng. & Hist., Fr. & Ger.		1915	22			2,300		
	McKinley, James M.	B.A., Tor.	Classics		1916	17			2,400		
	Ketcheson, Florence B.	B.A., Tor.	Mods., and Hist.		1908	11				2,200	
	Shortill, Robert N.		Manual Training...(Int.)		1912	4½	26		2,000		
	Sutherland, Isabel	B.S., Colum.	(Household Sci. Instr.)		1912	4½	10			1,400	
	McDonald, Evelyn	M.A., Tor.	Mods., and Hist. ...(Int.)	Phys. Cul.	1913	4½				1,700	
	Ball, Alice I. N.	B.A., Tor.	Math. ...(Int.)	Phys. Cul.	1913	3½				1,700	
	Hanna, William E.	B.A., Queen's	Mods., and Hist. ...(Int.)	Phys. Cul.	1914	3½	5		1,900		
	Barton, Ambrose R.	B.A., Tor.	Art, Phys. Cul. ....(Int.)		1914	2½	2		1,700		
	Barry, Minnie L.	B.A., Tor.	Art	Phys. Cul.	1914	3				1,600	
	Kirby, Luther H. .....(Int.)	B.A., Tor.	Science		1915	1½			1,600		
	Quail, May F.	M.A., Tor.	M. & H. (Int.), F. & G.		1915	3½				1,700	
	Bell, Edwin T.	B.A., McM.	Science	Agr. and Hor.	1915	2½			1,600		
	Mowat, John H. .....*(Int.)	B.A., Queen's	Eng. & Hist.	Phys. Cul.	1916	1	2		1,400		
	Evans, Rennie Mabel.*(Int.)	B.A., Tor.	Math. & Phys., Art		1916	1				1,400	
Toronto, Parkdale	Smith, Gilbert A.	B.A., Tor.	Science		1889	35	4	3,200			
	Spence, Nellie	B.A., Tor.	Eng. and Classics		1889	28	1			2,400	
	Hillock, Julia S.	B.A., Tor.	Fr. and Ger.		1900	23				2,400	
	Cosens, Absalom	M.A., Ph.D., Tor.	Science		1904	20	2		2,400		
	Mills, John H.	M.A., Queen's	Classics		1906	26	1		2,400		
	Sinclair, John	B.A., Tor.	Math. .....(Int.)		1897	28	8		2,300		
	Phillips, Wm. A.	B.A., Tor.	Fr., Ger., and Eng.		1906	28	1½		2,200		
	Reid, Thos. E.	B.A., Tor.			1905	12	8½		2,200		
	Sealey, Ethel M.	B.A., Tor.	Mods., and Hist.		1907	15	1			2,200	
	Hutchinson, John I.	M.A., Tor.	Eng. and Hist.....(Int.)		1909	8			2,000		
	Darroch, William F.				1910	7	16		2,100		
	Dugit, Rosalie A.	M.A., Tor.	Classics	Phys. Cul.	1913	8½				1,900	
	Bicknell, Harry E.	A.O.C.A.	Art		1913	5½			1,800		
	Martin, William H.	B.A., Tor.	Science		1916	2½	2		1,500		
	Barber, Wilbert A.. **(Int.)	B.A., Tor.	Math. and Phys.		1916	½			1,400		
Toronto, Riverdale	Moore, James R. .....***	M.A., Queen's	Science		1907	18	½	2,600			
	Wren, John S.	B.A., Tor.	Math.		1907	18			2,400		
	Willson, Alice M.	B.A., Tor.	Fr. and Ger.		1908	13	4			2,400	
	Kidd, Truman W.	B.A., Queen's	Art		1909	11½	6		2,200		
	Rogers, William H.	M.A., Trin.	Math.		1909	14½	2		2,200		
	Dunnett, Alfred H.	B.A., Queen's	Phys. Cul. (Int.)		1911	5½	11½		2,100		
	Munro, Peter F.	M.A.,Qns.,B.Paed.,Tor	Classics		1913	16	½		2,400		
	Nichol, S. Winnifred	M.A., Tor.	Phys. Cul. (Int.), Mds. & H.		1914	6½				1,800	
	Flock, F. Arthur	B.A., Tor.	Science		1915	7	2½		1,800		

*Temporary appointments in place of men on Active Service.
**Temporary appointment until return of Mr. Geo. M. Keith—on Active Service.
***Acting Principal during the absence of W. C. Michel—on Active Service.

List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917—Continued

Collegiate Institutes	Name of Teachers	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. and Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High School or Coll. Inst.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
Toronto, Riverdale, —Con.	Goring Ralph B.....(Int.)	B.A., Tor.	Math. & Phys.....	.....	1915	2½	2½	.....	1,700	.....
	Atkin, Edith L.....	B.A., Tor.	Mods. & Hist.	Phys. Cul....	1916	2½	....	.....	.....	1,700
	Philips, Mrs. E. Muriel.....	B.A., Tor.	Household Science.....	.....	1914	3	....	.....	.....	1,200
	Faw, Edward	.....	Manual Training.....	.....	1914	21	21	.....	1,900	.....
	Lewis, Nora.....	B.A., Tor.	Classics	Phys. Cul....	1916	3½	....	.....	.....	1,600
	Bruce, Marjorie H.....	B.A., Tor.	.....	Phys. Cul., Art	1916	3	....	.....	.....	1,400
	White, Herbert T.....	M.A., B.Sc., Queen's.	Science	.....	1916	4	½	.....	1,400	.....
Vankleek Hill.	Mitchener, James L.....	B.A., McM.	Science	A.&H.,Art,P.C.	1909	15	6	1,800	.....	.....
	Otto, George S.....	B.A., Queen's.....	Phys. Cl. (Int.), Mds. & H.	.....	1914	2½	3	.....	1,400	.....
	Kinnee, Herbert C. ...(Int.)	B.A., Tor.	Math. and Phys.	.....	1916	2	2	.....	1,300	.....
	Hardy, John H.....(Int.)	B.A., Tor.	Classics	Phys. Cul.....	1916	1½	1½	.....	1,200	.....
	Webster, Leah	.....	Com. .....(Int.)	.....	1916	3	5	.....	.....	1,100
	Millar, Maude.....(Int.)	.....	Art	Phys. Cul.....	1915	2	½	.....	.....	750
Windsor	Gavin, Frederick P.....	B.A., Queen's.....	Science	.....	1892	25	....	2,500	.....	.....
	Bell, Frederick H.....	B.A., Tor.	Eng., Hist., Fr. & Ger....	.....	1898	23½	....	.....	1,800	.....
	Reid, Robert.....	B.A., Tor.	Eng., Hist., Fr. & Ger....	.....	1909	23	4	.....	1,750	.....
	Brunt, Robert A.....	B.A., Tor.	Science	.....	1905	14	1	.....	1,750	.....
	Cleary, Norah.....	B.A., Tor.	.....	.....	1900	16	....	.....	.....	1,350
	Crassweller, Christopher L...	B.A., Tor.	Math.	.....	1913	32	2½	.....	1,750	.....
	Lowe, William D.....	M.A., Queen's	Eng. & Hist. (Int.) Class.	.....	1908	8½	....	.....	1,750	.....
	Cunningham, Evangeline.....	B.A., Tor.	Phys. Cul. .....(Int.)	.....	1909	12	....	.....	.....	1,350
	Srigley, Edgar C.....	.....	Com.	.....	1911	22	5	.....	1,750	.....
	Thompson, Peter M.....	M.A., Queen's.....	Science	.....	1913	16½	5	.....	1,750	.....
	Belton, Mildred.....(Int.)	B.A., Tor.	.....	.....	1915	2½	½	.....	.....	1,000
	O'Donoghue, Mary H.....	M.A., Tor.....	Mods. and Hist.	Phys. Cul.....	1915	8	....	.....	.....	1,600
	Wheelton, Leonard.....	.....	Art. .....(Int.)	.....	1915	8½	2	.....	1,750	.....

	Campbell, George S.	B.A., Tor.	Math. and Phys.	Phys. Cul.	1916	2½	2		1,750	
	Downey, William H. (Int.)			Phys. Cul.	1916	½	18		1,700	
	Edwards, Mabel A.		(Household Sci. Instr.)		1916	½	5			860
	DeGroat, Charles M.		(Manual Training Instr.)		1916	½			1,350	
Woodstock	Salter, Wesley J.	B.A., Tor.	Classics		1907	9½		2,000		
	Whitton, Frederick A.	B.A., Queen's	Fr. and Ger.		1913	4½			1,600	
	Staples, Louis Edgar	M.A., Queen's	Science		1910	14½	15		1,700	
	Russell, John W. (Int.)	M.A., McM.	Math.		1914	3	3		1,700	
	Robinson, Mary A.				1910	6	10			950
	MacKay, Emma L.			Phys. Cul.	1910	6	3½			800
	Shook, Muriel A.		Phys. Cul. (Int.)	Agr. & Hor.	1912	4½				900
	Buck, Charles S. (Int.)		Art	Phys. Cul.	1914	2½	1½		900	
	Cragg, Estella R.		Com.		1914	7	2½			1,100
	Walker, Ruth M. (Int.)	B.A., McM.	Mods. and Hist.	Phys. Cul.	1916	½				1,000
	Mercer, John S.		Manual Training		1905	11	6½		1,550	
	White, Lila K. G.		(Household Sci. Instr.)		1911	5	4½			1800
High Schools:										
Alexandria	MacKay, Donald	M.A., Tor.	Classics		1895	27	2½	1,700		
	Sweeney, Agnes C.			Art, Phys. Cul.	1909	11	3½			1,200
	Ostrom, Ethel L.	B.A., Queen's	Art (Int.)		1916	5				1,200
	Cameron, Murray (Int.)	B.A., Queen's		Phys. Cul.	1916	½			1,400	
Alliston	Davidson, Hugh	**B.A., Tor.**			1909	30	2	1,600		
	McArthur, Annie M.	B.A., Queen's	Fr. and Ger. (Int.)		1914	5	½			1,050
	Morton, Christina			Phys. Cul.	1912	7½				900
Almonte	Millar, Frederick G.	B.A., Tor.		Phys. Cul.	1914	13		1,600		
	Matthews, Jessie E.	B.A., Qn's.; M.A., Tor.		Phys. Cul.	1908	8½	3			1,000
	Watson, Mary I.	B.A., Queen's	Science	Phys. Cul.	1916	2½				1,000
	McKnight, Mary G. (Int.)	B.A., Tor.			1916	½	3			1,000
Amherstburg	Overholt, B. Percy				1910	8½	4	1,400		
	Lott, Edith A.		Phys. Cul. (Int.)		1915	2½	1			900
	O'Connor, Florence B.S. (Int.)	B.A., Tor.	Art	Phys. Cul.	1916	1	½			800
Arnprior	Rand, Wilfred E.	B.A., Tor.	Math.	Phys. Cul.	1910	24	1	1,900		
	Welsh, David A.	B.A., Tor.		Phys. Cul.	1911	6½	2½		1,600	
	Strang, Rose I.			Phys. Cul.	1911	19				1,100
	Hall, Margaret M. S.	B.A., Queen's		Art, Phys. Cul.	1912	6½	5			1,100
	Stothers, Minerva E.	B.A., Queen's	Art (Int.)		1916	8½				1,100
	Bell, M. F. Winnifred			Phys. Cul.	1916	9½				800
Arthur	McRitchie, Alexander R.	B.A., Tor.	Science	Agr. and Hor.	1913	19½	7	1,600		
	Lynch, Mary E.				1911	9½	2			900
	Kinnear, Jennie A. (Int.)	B.A., Queen's	Math.		1915	2				900
	Clement, Jessie M. (Int.)	B.A., Tor.		Phys. Cul.	1916	½				850

List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917—Continued

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								Principal	Male Assistants	Female Assistants
								$	$	$
Athens	Burchell, James E.	B.A., Queen's			1915	8½	12	1,700		
	Allen, Lillian M.	B.A., Tor.		Art, Phys. Cul.	1915	2½				1,000
	Halpenny, D. Milton...(Int.)		Phys. Cul.		1916		5		1,100	
	Hubbs, Mary W.....(Int.)	B.A., Queen's	Fr. and Ger.		1916	1½				900
	Stillwell, Laura M.....(Int.)	B.A., Queen's		Art	1916	1				800
Aurora	Ewers, Charles F.	B.A., Queen's			1915	10	12	1,700		
	Hisey, Abraham.....(Int.)	B.A., McM.	Science		1915	1½	1½		1,300	
	Zuern, Maude E.	B.A., Tor.	Classics	Phys. Cul.	1917	2½				1,050
	Ferguson, Muriel B.		Art.....(Int.)		1913	5½				1,000
Avonmore	Owen, Thomas A.	B.A., Cam.			1915	22	1	1,400		
	Pacey, Mabel I.....(Int.)			Phys. Cul., Art	1914	2½	½			850
	Heather, Ruth B.....(Int.)			Com., Phys. Cul	1915	1½				750
	Merry, Nellie P.....(Int.)	B.A., Queen's	Eng. and Hist.		1916					800
Aylmer	Rutherford, Walter W.	B.A., Tor.	Math.		1883	42	1	1,800		
	Byram, Kathleen A....(Int.)	B.A., Tor.	Mods. and Hist., Art.		1916					1,100
	Johnson, Guy E.....(Int.)				1916		1½		1,200	
	Allen, Eula P. .....(Int.)			Phys. Cul.	1916		2			800
Beamsville	Harrison, Charles W.	M.A., Vic.			1915	25		1,400		
	Stewart, Winona.....(Int.)	B.A., Queen's			1916	1½	1			750
	Jones, Gwendolyn B....(Int.)			Art	1916					700
Belleville	MacLaurin, Peter C.	B.A., McM.	Science		1909	12		2,000		
	Knight, William W.	B.A., Queen's	Math.		1892	28	5		1,800	
	Libby, Mary F.	B.A., Vic.	Eng. & Hist., Fr. & Ger.		1910	21	4			1,450

	Milburn, Edward F.	M.A., Trin.			1870	46	....	.....	1,250	.....
	Hitchon, Claire H.	M.A., McM.	Mods. and Hist. (Int.)		1913	6	....	.....	.....	1,100
	Irwin, Norman A.	B.A., Queen's	Phys. Cul.		1914	4½	1½	.....	1,400	.....
	Haynes, Andrew	B.A., Vic.			1914	6½	3	.....	1,600	.....
	Delmage, Emelyn E.	B.A., McM.	Art (Int.), Math.	Phys. Cul.	1915	9½	....	.....	.....	1,400
	Clark, Donald M.		Art (Int.), Com.	Phys. Cul.	1915	5½	....	.....	1,450	.....
	Hotson, Aletha L.	B.A., Tor.		Phys. Cul.	1916	3	1	.....	.....	1,450
	Wilson, James J. (Int.)	B.A., Queen's			1917	....	7	.....	1,000	.....
Bowmanville	Ross, Alexander H. D.	M.A.,Qn's; M.F.,Yale.	Math., Science		1915	15½	....	1,800	.....	.....
	McConachie, Robert G. (Int.)				1916	5½	1½	.....	1,200	.....
	Smithson, Laura A.	M.A., Tor.	Classics		1916	4½	....	.....	.....	1,100
	Smith, Isabel K.	B.A., Tor.	Art (Int.)		1913	9	....	.....	.....	950
Bradford	Wightman, Stanley	B.A., Queen's		Phys. Cul.	1915	12½	2½	1,600	.....	.....
	Kenny, Vera B. (Int.)	B.A., Tor.	Art		1916	½	....	.....	.....	750
	Grenville, Lucy H. (Int.)	B.A., Tor.		Phys. Cul.	1917	....	....	.....	.....	775
Brampton	Fenton, William J.	B.A., Tor.	Classics		1891	26	1½	2,050	.....	.....
	Halnan, Lemen R.	M.A., Trin.	Math.		1905	13	3	.....	1,750	.....
	Hutchinson, May R.			Art	1910	13	6	.....	.....	1,400
	Percy, Herbert A.				1914	8	2	.....	1,700	.....
	Hamilton, Margaret A.	B.A., Tor.	Mods. and Hist.	Phys. Cul.	1915	8	....	.....	.....	1,400
Brighton	Cooper, Alex. B.	B.A., Queen's	Vocal Music (Int.)		1916	14½	8	1,550	.....	.....
	McIntyre, Mrs. Edith	B.A., Tor.	Mods. and Hist.	Phys. Cul.	1916	10½	....	.....	.....	800
	Shourds, Olive I. (Int.)	B.A., Tor.			1916	½	....	.....	.....	700
Caledonia	Hicks, Thomas James	B.A., Queen's		Phys. Cul.	1913	4½	11½	1,600	.....	.....
	Lawrence, Charles F. (Int.)	B.A., Tor.		Phys. Cul.	1915	1½	5½	.....	1,300	.....
	Kerr, Maybelle G. (Int.)	B.A., Tor.	Mods. and Hist.	Phys. Cul.	1915	1½	....	.....	.....	950
	Smith, Hilda H. C.	B.A., Tor.	Art	Phys. Cul.	1915	2½	....	.....	.....	950
Campbellford	Moffat, Thomas E.	B.A., Queen's			1916	10	2	1,800	.....	.....
	Tobin, Beatrice (Int.)	B.A., Tor.	Classics	Phys. Cul.	1915	1½	....	.....	.....	1,050
	Douglas, Gordon A. (Int.)				1915	1½	2	.....	1,000	.....
	McCoy, Kathleen A. (Int.)	B.A., Tor.		Phys. Cul.	1917	1	½	.....	.....	900
	Haycock, Margaret A. G. (Int.)	B.A., Queen's	Art (Int.)		1917	½	3½	.....	.....	900
Carleton Place	Wethey, Edmund J.	B.A., Trin.; M.A., Tor	Math.		1910	16	1	1,600	.....	.....
	Ewing, Florence May	B.A., Queen's			1910	12½	2	.....	.....	1,200
	McNeely, Priscilla V. M.	M.A., Trin.	Science		1913	7	1	.....	.....	1,200
	Walker, Alexina A. C.		Art (Int.)	Phys. Cul.	1916	2½	....	.....	.....	1,000

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								Principal	Male Assistants	Female Assistants
								$	$	$
Cayuga	Skeele, James E.	B.A., Tor.			1897	24	....	1,500	.....	.....
	Kennedy, Anna (Int.)	B.A., Tor.			1915	1¾	....	.....	.....	1,000
	Vanderburgh, Ira A. (Int.)			Phys. Cul.	1916	¾	4	.....	1,000	.....
	Grant, Dorothy J. (Int.)	B.A., McM.	Mods. and Hist.	Phys. Cul.	1917	....	....	.....	.....	650
Chatsworth	Griffin, Albert D.	B.A., Queen's	Math.		1916	22¼	....	1,400	.....	.....
	Eby, Emma L.			Art, Phys. Cul.	1912	4¾	4¾	.....	.....	850
Chesley	Bannister, John A.	B.A., Queen's	Classics	Phys. Cul.	1914	7	13	1,700	.....	.....
	Halliday, Florence F.			Phys. Cul.	1910	7	1	.....	.....	1,200
	Montgomery, Mayme I.	B.A., McM.	Fr. and Ger., Art (Int.)		1915	3¾	....	.....	.....	750
	McEachran, Mary	B.A., Queen's			1916	10¾	7	.....	.....	1,200
Chesterville	Ball, Emerson E.	B.A., Tor.	Mods. and Hist.		1915	9¾	....	1,400	.....	.....
	Smith, James T. (Int.)			Phys. Cul.	1916	¾	....	.....	875	.....
	O'Neill, Mary M. (Int.)	B.A., Queen's		Phys. Cul.	1917	....	....	.....	.....	750
Colborne	Bellamy, Wesley	B.A., Vic.			1892	27	3¾	1,500	.....	.....
	Hinds, Margaret J.				1910	6¾	3¾	.....	.....	1,000
Cornwall	Fetterly, Hiram B.	M.A., Queen's	Science		1904	12¾	10	2,000	.....	.....
	Smith, Lyman C.	B.A., Vic.	Classics, Eng. and Hist.		1912	38¾	2	.....	1,700	.....
	Birchard, Alexander F.		Art (Int.), Com.	Phys. Cul.	1898	22	12	.....	1,550	.....
	Norris, Arthur D.	B.A., Tor.			1907	10	7	.....	1,400	.....
	Caldwell, Alexander	B.A., Royal, Dublin	Com. (Int.)		1912	4¾	....	.....	1,300	.....
	Nugent, Eleanor	B.A., Tor.	Fr. and Ger.	Phys. Cul.	1914	3	....	.....	.....	1,100
	Morrison, Olive E. (Int.)	B.A., Tor.	Math. and Phys.	Phys. Cul.	1915	1¾	2	.....	.....	1,275
	Cumming, Eva M. (Int.)	B.A., Queen's			1915	1¾	2¾	.....	.....	950
	Hendry, Earl (Int.)		Phys. Cul.		1916	1¾	2	.....	1,250	.....
	Kilgour, Ruby (Int.)	B.A., Queen's			1916	1¾	4	.....	.....	900

Deseronto	James, George M.	B.A., LL.B., Tor.		Art	1915	5	15	1,600		
	Stocker, Eva R.				1915	5½	4½			900
	Beaman, Elsie K.		Phys. Cul. (Int.)		1916	3½				800
Dundalk	Wright, David T.				1911	10½	10	1,400		
	MacKay, Katharine M. (Int.)	B.A., Queen's		Art	1916	1½	½			850
	Bunting, Winnifred (Int.)	B.A., Tor.		Phys. Cul.	1917		2			800
Dundas	Tuke, William H.	B.A., Queen's	Phys. Cul. (Int.)		1914	11		1,850		
	Cowan, Euphemia J.	M.A., Tor.		Phys. Cul.	1913	6½				1,350
	Brogden, Mrs. Irene M.	B.A., Tor.		Phys. Cul., Art	1914	3½	3			1,150
	Barker, George A.		Com.		1914	9	11		1,350	
	Hyde, Catherine I. (Int.)	B.A., Tor.	Household Science	Phys. Cul.	1915	1½	5			1,000
Dunnville	French, Fred. W.	B.A., Tor.	Classics		1916	19½		1,700		
	Archibald, Robert H.			Phys. Cul.	1913	6½			1,500	
	Penson, Elizabeth	M.A., Queen's	Science		1915	7	1			1,400
	Dengate, Winnifred	B.A., McM.			1915	6½	½			950
	Luke, Dorothy H. (Int.)	B.A., Tor.	Mods. and Hist.	Phys. Cul.	1917	½	1			1,000
Durham	Allan, Thomas			Phys. Cul.	1888	28	12	1,500		
	Cryderman, May (Int.)	B.A., Tor.	Eng. and Hist.	Phys. Cul.	1915	2½	½			900
	Weir, Julia	B.A., Queen's	Art (Int.)		1915	4½	12			900
Dutton	Morrison, William J.	B.A., Tor.		Agr. & H., P.C.	1915	4½	5	1,700		
	Cole, Addison	B.A., Tor.			1908	15½			1,000	
	Ross, Margaret C. (Int.)	B.A., Dublin			1915	2				950
	Lees, Margaret A. (Int.)	B.A., Queen's			1917		4			850
Elora	Bell, John J.	B.A., Tor.			1915	31	1	1,400		
	Flanagan, Florence M.	B.A., Tor.			1913	3½	1			900
	Dickson, Marion C. (Int.)		Com.	Phys. Cul.	1916	½	4			850
Essex	Massey, Arthur W.	B.A., Vic.	Math., Eng.		1909	25	1	1,750		
	Richardson, Ada E.	B.A., Queen's			1911	5½				1,050
	Wilson, Elizabeth A. R. V.			Art	1912	4½	5			950
	Davies, Norman (Int.)	B.A., McM.	Science, Phys. Cul.		1915	1½			1,400	
	Johnston, Hally	B.A., Tor.		Art, Phys. Cul.	1916	3½				1,025
Fergus	Perry, Peter	M.A., Tor.	Classics		1908	40		1,500		
	Austin, Grace C.				1910	7½	1			950
	Menzies, Leslie P.	B.A., Tor.	Science	Phys. Cul.	1917	2	1½		1,000	
	Nichol, Christene (Int.)		Art		1916	1				750

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								Principal	Male Assistants	Female Assistants
								$	$	$
Flesherton	White, Harry S.				1912	9½	2	1,400		
	Holmes, Margaret	B.A., Tor.			1914	2½	3			750
	Dafoe, Mary W. (Int.)	B.A., Tor.		Phys. Cul.	1916	½				700
Forest	Williams, Albert	B.A., Queen's			1906	12	5	1,600		
	Barrett, Wellington J. C.	B.A., Queen's			1916	3½			1,200	
	DeCou, Nellie	B.A., Tor.	Fr. and Ger.	Art	1914	12	2			1,000
Gananoque	Graham, Robert George	B.A., Vic.	Math.		1894	25		1,600		
	Edwards, Rebecca S.			Art	1908	7½	9			1,000
	McAllister, Annie G.				1911	9	1½			1,000
	Douglas, Leila I.	B.A., Tor.	Fr. and Ger.	Phys. Cul.	1916	2½				1,000
Georgetown	Ross, Ralph	B.A., B.Paed., Tor.	Classics		1914	29		1,700		
	Hooper, Hazel C. (Int.)	B.A., McM.	Art		1916	2	½			900
	Ferguson, Arthur W. (Int.)	B.A., Queen's	Math.	Phys. Cul.	1916	1½	1		1,300	
	Erwin, Willis M. (Int.)	B.A., Queen's			1916	½	½		1,200	
	Morgan, Pearl S. (Int.)		Com.	Phys. Cul.	1916	½	2			900
Glencoe	Hamilton, James A.	M.A., Tor.			1916	8½		1,300		
	Baird, Jean F. (Int.)	B.A., Tor.		Phys. Cul.	1916	½	½			800
	Fothergill, Ethel L. (Int.)			Phys. Cul.	1916	½	1			650
Gravenhurst	McNabb, Finlay	B.A., Queen's		Phys. Cul.	1916	4½	7	1,500		
	Newton, Amy A. (Int.)	B.A., Tor.	Mods. and His.	Phys. Cul.	1916	½				750
	Broughton, Clara E.			Art	1906	11½				750
Grimsby	Montgomery, William	B.A., Tor.	Math.		1916	16½		1,700		
	Campbell, Hughena M.				1913	7	½			950
	McVean, Kathleen P. (Int.)	B.A., Tor.		Phy. Cul., Art.	1916	1				800

Hagersville ..	Haviland, Hugh J.	B.A., Tor.	Classics	Agr. & Hor.	1913	16½	....	1,400	.....	.....
	Finch, Ilma Mae	B.A., Tor.		Phys. Cul., Art.	1914	2½	....	.....	.....	750
	Hind, Edith J.		Com. (Int.)		1915	8	3½	.....	.....	1,000
	Almas, Anna F. (Int.)	B.A., Tor.			1916	½	....	.....	.....	750
Haileybury ..	Wilson, W. Asbury	B.A., Queen's			1910	17½	....	2,000	.....	.....
	McGregor, Annie K.	B.A., Queen's		Phys. Cul.	1916	7½	....	.....	.....	1,300
	Elder, Christina H. (Int.)	M.A., Queen's			1916	1	5½	.....	.....	1,300
	Trace, Cephas M. (Int.)	M.A., Queen's	Com.		1916	½	1	.....	1,200	.....
Harriston	Hobbs, Thomas	B.A., Tor.	Math.		1911	14½	5½	1,700	.....	.....
	Reid, Hazel I.	B.A., Tor.		Phys. Cul.	1914	3	....	.....	.....	900
	Tucker, Mary C. (Int.)	M.A., Tor.	Science	Phys. Cul.	1915	1½	11	.....	.....	1,400
	Appelbe, Louise A. (Int.)	B.A., Tor.	Mods. and His.	Phys. Cul.	1916	1	....	.....	.....	900
Hawkesbury ..	Higginson, Marie A.	B.A., Queen's	Math. (Int.)		1915	16	2½	1,500	.....	.....
	Hall, Grace (Int.)	B.A., Tor.	Mods. and His.	Art	1915	2	1	.....	.....	900
	Smith, Sadie L. (Int.)	B.A., Tor.	Science	Art	1915	1½	....	.....	.....	800
Iroquois	Campbell, William A.	B.A., Queen's	Phys. Cul. (Int.)	Art	1913	3½	....	1,400	.....	.....
	Mulloy, Lulu E.				1911	9	3½	.....	.....	1,300
	Martin, Jean E. (Int.)	B.A., Tor.	Math. and Phys.		1916	½	....	.....	.....	1,000
	Wallace, Mary H. (Int.)	B.A., Tor.			1916	½	1½	.....	.....	800
Kemptville ...	Clothier, James O.	B.A., Queen's	Fr. and Ger. (Int.)		1913	20	....	1,600	.....	.....
	Medeof, James L. (Int.)	B.A., Queen's	Science	Phys. Cul.	1915	1½	1	.....	1,100	.....
	Johnston, Katie B.	B.A., Tor.	Eng. and His.		1911	5½	4	.....	.....	1,100
	Johnston, Frances V.	B.A., Tor.		Phys. Cul.	1913	3½	2	.....	.....	1,050
	Clothier, Bessie		Art (Int.)	Phys. Cul.	1916	5½	2	.....	.....	1,000
Kenora	Cornwell, John L.	B.A., Tor.	Math.		1914	24½	....	2,000	.....	.....
	Hamer, Lottie E.	B.A., Tor.	Mods. & His., Phys. Cul.		1914	3	2½	.....	.....	1,300
	McMillan, Roy J.		Phys. Cul. (Int.)	Art	1916	2½	....	.....	1,400	.....
Kincardine ..	Nelson, Albert E.	B.A., Queen's			1916	8½	6	1,600	.....	.....
	Elliott, Frederick V. (Int.)	B.A., West.		Agr. & Hor.	1916	1½	2	.....	1,350	.....
	Buchanan, Winnifred	B.A., Queen's			1915	6	2½	.....	.....	1,100
	Reynolds, Myrtle V.	B.A., Queen's & West.	Mods. and Hist. (Int.)	Phys. Cul.	1915	2½	1	.....	.....	1,100
	Cruikshank, Gertrude . (Int.)	B.A., Tor.			1916	½	....	.....	.....	800
	Hamilton, Agnes T.		Art (Int.)		1916	3½	....	.....	.....	1,000
Leamington ..	Wright, Robert	B.A., Queen's	Math		1912	20½	4	1,900	.....	.....
	Campbell, George A.			Agr. & Hor.	1908	8½	12	.....	1,500	.....
	Feasby, Harold G. (Int.)			Phys. Cul.	1916	1½	....	.....	1,000	.....
	Thomas, Margaret	B.A., Queen's			1916	4½	4	.....	.....	1,000
	McGinn, Lulu M. (Int.)	B.A., Tor.	Mods. & Hist.	Art, Phys. Cul.	1916	1½	....	.....	.....	1,000

List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917—Continued

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								Principal	Male Assistants	Female Assistants
								$	$	$
Listowel	Elliott, Henry E.	B.A., Queen's			1913	8½	3	1,700	.....	.....
	Ellis, Roxie A.		Art (Int.)		1915	4½	1	.....	.....	1,000
	Gee, Norma			Phys. Cul., Art.	1915	3½	....	.....	.....	900
	Schmietendorf, Herbert F.				1916	4½	4	.....	1,200	.....
	Penfold, Janet L. (Int.)	B.A., Tor.	Classics		1916	1½	....	.....	.....	1,000
	Hay, Hazel F. (Int.)	B.A., Tor.			1916	½	....	.....	.....	900
Lucan	Leckie, Bruce E.	B.A., McM.	Science	Phys. Cul.	1913	6½	2	1,650	.....	.....
	Philp, J. Henry (Int.)	B.A., Queen's			1915	1½	....	.....	1,000	.....
	Vrooman, Agnes S.	M.A., Western			1913	3½	....	.....	.....	825
	Murray, Olive H.			Art	1916	3½	1	.....	.....	700
Madoc	Arnold, Hubert G.	B.A., Queen's	Science (Int.)		1916	3½	....	1,600	.....	.....
	Hanna, Ella A.				1914	6½	4½	.....	.....	1,200
	Gillard, Leah A.		Art (Int.)		1916	3	1	.....	.....	800
	Hanna, Lorna (Int.)	B.A., Tor.	Eng. & Hist.		1917	....	....	.....	.....	800
Markdale	Preston, Thomas	B.A., B.Pæd., Tor.	Science	Phys. Cul.	1915	21	2	1,450	.....	.....
	Kelly, Mary (Int.)	B.A., Tor.			1917	....	....	.....	.....	700
Markham	Bell, James S.	B.A., Tor.		Phys. Cul.	1912	7½	2	1,700	.....	.....
	Campbell, Stella K.			Phys. Cul.	1912	9½	1½	.....	.....	1,000
	Russell, F. Josephine				1910	10½	4	.....	.....	1,000
	Stewart, Garnet A. (Int.)				1916	½	....	.....	1,000	.....
Meaford	Dundas, Arthur A.	B.A., Tor.			1897	20	2	1,800	.....	.....
	Hammond, John E.		Com.	Art	1906	10½	3	.....	1,300	.....
	Williams, Edna J.	B.A., Tor.		Phys. Cul.	1912	9	....	.....	.....	1,500
	Cook, Alta-Lind	B.A., Tor.	Mods. and Hist.	Phys. Cul.	1914	2½	....	.....	.....	1,200
	Stilwell, Ayrest L. (Int.)	B.A., McM.		Phys. Cul.	1916	1½	2	.....	1,400	.....

Midland	Glass, William Arthur	B.A., Tor.		Phys. Cul.	1904	14½	....	1,900	.....	.....
	Clarke, Eleanor L.	B.A., Tor.		Art, Phys. Cul.	1913	4	1	.....	.....	1,100
	Dunlop, Charles G.			Phys. Cul.	1914	7	1	.....	1,500	.....
	Boyle, Edna M. (Int.)	B.A., Tor.	Math. and Phys.	Phys. Cul.	1915	1½	1	.....	.....	1,100
Mitchell	Elliott, John	B.A., Queen's	Eng., Math.		1914	33	5	1,600	.....	.....
	Alcombrack, Edna A.	B.A., Tor.			1914	4	1	.....	.....	950
	Adamson, Florence M. (Int.)	B.A., Tor.	Art	Phys. Cul.	1916	1½	....	.....	.....	900
	Ramage, George E. (Int.)	B.A., McM.		Phys. Cul.	1916	½	....	.....	1,000	.....
Morewood	Loucks, Horatio				1902	14½	5½	1,800	.....	.....
	Rodden, Mary R. (Int.)	B.A., Tor.			1916	½	⅓	.....	.....	800
Mount Forest	Speirs, Thomas E.	B.A., Tor.	Math. and Phys.		1907	10½	2	1,600	.....	.....
	Fraser, Lucille		Art (Int.)		1914	6½	3	.....	.....	1,050
	Gilroy, Emily I.	B.A., Tor.		Phys. Cul.	1914	2½	....	.....	.....	850
	Noonan, Aileen (Int.)	B.A., Tor.	Mods. and Hist.	Phys. Cul.	1915	1½	....	.....	.....	825
Newburgh	Andrews, Robert T.	B.A., Tor.	Classics		1910	12	14	1,200	.....	.....
	McKeracher, Florence J.	B.A., Queen's		Phys. Cul.	1911	7	3	.....	.....	1,000
	Murphy, Edith A.	B.A., Queen's		Art	1914	3	....	.....	.....	800
Newcastle	McMahon, Frank O.	B.A., Tor.		Phys. Cul.	1916	8½	6	1,200	.....	.....
	Arnold, Leita E. (Int.)	B.A., Queen's		Phys. Cul.	1916	½	....	.....	.....	650
Newmarket	Fairchild, Austin H.	B.A., McM.	Math.		1915	11½	5	1,650	.....	.....
	Hollingshead, John E.				1884	32	2½	.....	1,150	.....
	Kidd, William L.			Phys. Cul.	1910	12	10	.....	1,350	.....
	Wickett, Laura E.		Com.	Art	1909	7½	1½	.....	.....	1,100
	Taylor, Annie M. A.	B.A., Tor.	Phys. Cul.		1914	2½	....	.....	.....	900
	Tighe, Elsie (Int.)	B.A., Tor.	Eng. & Hist.		1916	½	....	.....	.....	900
	Robinson, Bertha E. (Int.)				1916	....	1	.....	.....	650
Niagara	Bale, Geo. S.	B.A., Tor.	Eng., Hist., Fr. & Ger.		1914	16	....	1,300	.....	.....
	Clark, Etta				1915	3½	....	.....	.....	800
Niagara Falls, South	Myer, Albert N.	M.A., Trin.	Math.		1908	22½	....	2,100	.....	.....
	Dawson, Margaret M.			Com.	1907	9	2	.....	.....	1,000
	Johnston, E. Grace			Phys. Cul.	1914	4½	2	.....	.....	900
	Porter, William A. (Int.)			Agr.&Hor., P.C.	1916	1½	2	.....	1,000	.....
	Mills, Jennie (Int.)		Com.	Agr.&Hor., Art, Ho. Sci., P.C.	1916	1	10	.....	.....	1,000
Norwood	Lawlor, Richard G.	B.A., Queen's			1909	12½	8	1,600	.....	.....
	Ferris, Kathleen B. (Int.)	B.A., Tor.		Art, Phys. Cul.	1916	1½	....	.....	.....	800
	Edmunds, Lulu J.			Art	1917	8	2½	.....	.....	800

List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917—Continued

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								Principal	Male Assistants	Female Assistants
								$	$	$
Oakville.....	Wyndham, William B.....	B.A., Tor.....	Eng., Hist., Fr. & Ger....	Agr.&Hor., P.C.	1914	20	6½	1,800	.....	.....
	Ovens, Winifred E.	B.A., Western.....	.....	.....	1912	8½	....	.....	.....	1,200
	Cordingley, Margaret L. (Int.)	B.A., Tor.....	.....	.....	1917	....	....	.....	.....	1,000
Omemee.....	Morden, Frances D.....	B.A., Tor.....	Phys. Cul. .....(Int.)	.....	1912	10	2	1,250	.....	.....
	Millard, Lena	.....	.....	Art, Phys. Cul..	1916	2½	3	.....	.....	800
Orangeville...	Hackett, Edward	B.A., Dublin.....	.....	.....	1915	7½	....	1,700	.....	.....
	Strang, Grace M.	B.A., Tor.....	Mods. and Hist.....	.....	1907	10½	....	.....	.....	1,200
	MacIntyre, Sada	.....	.....	Art.....	1912	4½	6	.....	.....	850
	Smith, S. Louise	.....	.....	.....	1915	7½	3	.....	.....	1,200
	Scott, Arthur G.....(Int.)	B.A., Queen's.....	.....	Phys. Cul.....	1915	1½	....	.....	1,000	.....
Oshawa.....	Dolan, John Henry	B.A. Queen's.....	Classics.....	.....	1911	18½	....	2,000	.....	.....
	Stevenson, Lewis	B.A., B.Sc., Vic.....	Math., Science	.....	1902	24	3	.....	1,700	.....
	Courtice, Samuel J.	B.A., Tor.....	Phys. Cul. (Int.), Math....	.....	1908	16	6	.....	1,500	.....
	Faint, Pearl B.	M.A., Tor.....	Mods. and Hist.....	.....	1910	8½	....	.....	.....	1,300
	Armstrong, Florence J.....	.....	.....	.....	1910	6½	5	.....	.....	800
	Brimicombe, Bessie F.....	.....	Com. .....(Int.)	Art.....	1915	4	3	.....	.....	1,100
Paris.....	Bell, Walter N.....	B.A., Tor.....	Classics	.....	1898	26	....	1,800	.....	.....
	Willson, H. Blanche	B.A., Tor.....	Math.	Phys. Cul.....	1912	4½	1½	.....	.....	1,250
	Black, Harriet E.....	M.A., Tor.....	Mods.&H., (Int.), Fr. & Ger..	Phys. Cul.....	1914	2½	2	.....	.....	1,000
	Pridham, C. Irene	.....	Com.	Phys. Cul.....	1917	3½	....	.....	.....	1,000
Parkhill.....	Might, Lincoln	M.A., Queen's.....	Art (Int.), Science.....	Phys. Cul.....	1916	16	2	1,500	.....	.....
	Gillespie, Mary A.	M.A., Tor.....	.....	Phys. Cul.....	1915	5	....	.....	.....	850
	Fenn, Lloy E.....(Int.)	B.A., Queen's.....	.....	.....	1916	¾	....	.....	.....	800
	Jones, Rae L. L.....(Int.)	B.A., West.....	.....	.....	1916	¾	1½	.....	.....	800

Parry Sound..	Girdwood, Arthur R.	B.A., McM.	Math.	Phys. Cul.	1914	13	....	1,900	.....	.....
	Whitton, L. Pearl	B.A., Queen's	Mods.&Hist.(Int.),Fr.&Gr.		1914	3½	....	.....	.....	1,050
	Hodgins, Ethelberta	.....	Art (Int.)	.....	1914	5	1	.....	.....	900
Pembroke.....	Flach, Ulysses J.	M.A., Tor.	Math.	.....	1913	28	....	2,000	.....	.....
	Dickey, M. Ada	B.A., Tor.	Mods. and Hist.	.....	1914	14	....	.....	.....	1,500
	Moir, Isabella	.....	Com.	Art.	1913	9½	8	.....	.....	1,300
	Rose, Marion H.	.....	Fr. and Ger.	.....	1911	21½	4	.....	.....	1,300
	Shales, Walter E.	M.A., Queen's	Science, Phys. Cul.	Agr. & Hort.	1916	2½	5	.....	1,700	.....
	Miller, Everton A.	M.A., McM.	Classics	.....	1917	4½	3	.....	1,700	.....
	De la Mater, Magdalene	.....	.....	Phys. Cul.	1917	7½	....	.....	.....	.....
Penetanguis'ne	Keefe, R. Daniel	B.A., Tor.	.....	.....	1907	14½	....	1,750	.....	.....
	Sweet, Fred. G.	.....	Com (Int.)	.....	1911	7	4½	.....	1,250	.....
	Ney, Louisa E.	.....	Art (Int.)	.....	1917	5	3	.....	.....	900
Petrolea.....	MacKichan, Peter	B.A., Queen's	.....	.....	1916	2½	3	1,500	.....	.....
	McPhail, Alexander C.	B.A., Queen's	.....	.....	1910	22½	9½	.....	1,300	.....
	McKellar, Mary I. (Int.)	B.A., Queen's	Mods. & Hist.	Phys. Cul.	1916	½	1	.....	.....	1,000
	Saunders, Lucy (Int.)	B.A.,West.,M.A.,Mich	.....	.....	1916	2½	4½	.....	.....	1,000
Plantagenet...	O'Hagan, Thomas	B.A., Ottawa	.....	.....	1916	10½	....	1,500	.....	.....
	O'Connor, Katie B. (Int.)	.....	.....	.....	1916	1½	2	.....	.....	800
	Mulvihill, Mary B. (Int.)	.....	.....	Art, Phys. Cul.	1916	1½	3	.....	.....	700
Port Dover....	Barron, Robert A.	B.A., Tor.	Class., Eng., Fr. & Ger.	.....	1913	34	5	1,400	.....	.....
	McBride, Lela C. (Int.)	.....	.....	Phys. Cul., Art.	1915	1½	2	.....	.....	800
Port Elgin....	Cameron, James G.	B.A., Queen's	.....	Art, Phys. Cul.	1916	15½	14½	1,500	.....	.....
	Duncan, Muriel (Int.)	B.A., Tor.	.....	Phys. Cul.	1915	1½	....	.....	.....	800
	McDonald, Vivian C. (Int.)	.....	.....	Phys. Cul.	1915	1½	....	.....	.....	850
Port Hope.....	Howson, Bruce F.	B.A., Queen's	Math. & Phys. (Int.)	.....	1916	7½	2	1,700	.....	.....
	Affleck, Archibald A. (Int.)	B.A., McM.	Classics	.....	1913	3½	....	.....	1,450	.....
	Copeland, George E.	M.A., Queen's	Science	Agr. & Hort.	1911	5½	3½	.....	1,400	.....
	Scott, Ethel O.	M.A., Tor.	Mods.&Hist.(Int.), Fr. & G.	.....	1911	5½	4½	.....	.....	1,450
	Tuer, Margaret	.....	Art (Int.), Com.	Phys. Cul.	1910	10	5	.....	.....	1,000
	Taylor, Marguerite I. (Int.)	B.A., Tor.	Eng. and Hist.	Phys. Cul.	1915	1½	....	.....	.....	1,000
Port Perry....	Follick, Thomas H.	M.A., Vic.	Science	.....	1915	26½	2	1,600	.....	.....
	Stone, George	.....	.....	.....	1883	35	4	.....	1,300	.....
	Harris, L. Morwenna	.....	.....	Phys. Cul., Art.	1912	6½	1½	.....	.....	850
	De Foe, Eugénie M. (Int.)	B.A., Tor.	Phys. Cul.	.....	1916	½	5	.....	.....	1,000
Port Rowan...	Kerr, Mrs. Winnabel E.	B.A., McM.	Art (Int.)	.....	1916	4½	5	1,100	.....	.....
	Franklin, Helen A. (Int.)	B.A., Tor.	.....	Phys. Cul.	1915	1½	....	.....	.....	800

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								Principal	Male Assistants	Female Assistants
								$	$	$
Prescott	Trench, William W. A.	B.A., Tor.	Classics	Com.,Phys.Cul.	1911	12½	5	1,700	.....	.....
	Goulding, Hanna M.	.....	.....	Phys. Cul., Art.	1911	13½	2½	.....	.....	1,200
	Pinel, Hattie L.	M.A., Tor.	Mods. and Hist.	Phys. Cul.	1911	5½	....	.....	.....	1,000
	Greig, Earl H. (Int.)	B.A., Queen's	.....	.....	1916	½	....	.....	1,100	.....
Richmond Hill	Jenkins, Robert S.	M.A., Tor.	E.&H.(Int.),Class.,Fr.&G.	.....	1916	11	....	1,500	.....	.....
	Stewart, James H.	.....	Art (Int.)	Phys. Cul.	1914	2½	2	.....	1,100	.....
	Stinson, Mildred E. (Int.)	B.A., Tor.	Mods. & Hist., Phys. Cul.	.....	1916	1½	....	.....	.....	800
Rockland	Walsh, John C.	B.A., Ottawa	.....	Phys. Cul.	1913	10½	....	1,450	.....	.....
	O'Callaghan, Mila	.....	.....	.....	1913	5½	3½	.....	.....	800
	Coughlan, Anna T. (Int.)	B.A., Tor.	.....	.....	1916	½	....	.....	.....	800
Sault Ste. Marie	Race, Wilfrid B.	B.A., Queen's	Mods. and Hist.	.....	1904	24	....	2,600	.....	.....
	Rudlen, George W.	B.A., Tor.	Math.	.....	1904	18	....	.....	1,950	.....
	Walkom, Daniel T.	B.A., Queen's	.....	.....	1911	7	3½	.....	1,900	.....
	Patterson, Harriet A.	B.A., Queen's	.....	.....	1914	10	....	.....	.....	1,450
	Clayton, Vivian E.	B.A., Man.	Art (Int.), Com.	.....	1908	10½	1½	.....	.....	1,450
	MacKenzie, Anna	.....	.....	.....	1910	6½	11	.....	.....	1,150
	Warnock, Grace I.	.....	Phys. Cul. (Int.)	.....	1916	2½	....	.....	.....	900
	Later, Thomas J.	.....	Manual Training (Int.)	.....	1910	6	10	.....	1,600	.....
	Shaw, Mary P.	.....	(Household Sci. Instr.)	.....	1910	10	....	.....	.....	950
Shelburne	Lishman, Frederic R.	B.A., Queen's	.....	Art	1916	4½	....	1,400	.....	.....
	Govenlock, Ada H. (Int.)	.....	.....	Phys. Cul.	1916	2	2½	.....	.....	750
	Gabriel, Mary (Int.)	.....	.....	Phys. Cul.	1916	½	1	.....	.....	700
Simcoe	Christie, James D.	B.A., Tor.	Eng., Fr. and Ger.	.....	1889	38	....	1,600	.....	.....
	Messmore, Joseph F.	B.A., Tor.	Classics	.....	1911	25	....	.....	1,350	.....

	Martin, Thomas W.		Phys. Cul. (Int.)		1917	3½	....	.....	1,350	.....
	Case, H. James		Phys. Cul. (Int.)		1914	11	13	.....	1,300	.....
	Goodland, Alma		Com.	Art	1907	10	11	.....	.....	1,000
	Brown, Annie E. (Int.)				1916	½	....	.....	.....	775
Smithville	Elliott, Thomas W.	B.A., Tor.	Science		1914	10½	11	1,500	.....	.....
	McNab, Alberta (Int.)	B.A., Tor.		Art, Phys. Cul.	1916	½	1	.....	.....	800
	Nelson, Eva E. (Int.)	B.A., Queen's			1916	½	½	.....	.....	800
Stirling	Kennedy, George E.	B.A., Vic.	Science		1893	24	4	1,500	.....	.....
	Harrington, Marjorie L. (Int.)	B.A., Tor.			1916	½	....	.....	.....	700
	Galloway, J. Louise (Int.)	B.A., Tor.	Mods. & Hist.		1916	1½	....	.....	.....	750
	Grills, Margaret		Art (Int.)		1916	2½	5½	.....	.....	800
Streetsville	Laing, Maybelle M.	B.A., Queen's		Art	1916	3½	3	1,000	.....	.....
	Gerhardt, Henry W.			Phys. Cul.	1913	3½	....	.....	1,000	.....
	Tanner, Annie M. (Int.)		Com.	Phys. Cul., Art	1916	½	1	.....	.....	900
Sudbury	Berlanguet, Hugh S.	B.A., Queen's	Classics		1910	13	....	2,200	.....	.....
	O'Grady, John L.	B.A., Queen's			1916	6½	2	.....	1,600	.....
	Bibby, Marie V.	B.A., Tor.	Mods. and Hist.		1911	10½	....	.....	.....	1,600
	File, Lillian A.		Com. (Int.)	Phys. Cul.	1913	6½	6½	.....	.....	1,300
	Forbes, William B.		Science	Phys. Cul.	1917	21½	1	.....	1,600	.....
Sydenham	Sine, Frederick	M.A., B.Sc., Qn's		Agr. & Hor.	1915	9½	5	1,800	.....	.....
	Knowles, John H. (Int.)	B.A., Queen's		Phys. Cul.	1916	½	2	.....	1,200	.....
	Hiscock, May B.	B.A., Queen's		Phys. Cul.	1910	6½	....	.....	.....	900
	Davidson, Edith M.	B.A., Queen's			1916	5	....	.....	.....	950
Thorold	Bonis, Harry	B.A., Tor.	Classics	Art	1914	26	1	1,600	.....	.....
	Fraser, Mary A.	B.A., Queen's			1914	2½	....	.....	.....	1,000
	Munro, Margt. K.	B.A., Tor.	Math. (Int.)	Phys. Cul.	1916	6½	5½	.....	.....	900
Tillsonburg	Auld, Charles	B.A., Tor.	Math.		1914	22	....	2,000	.....	.....
	Hindson, Hilda M.		Com.	Art, Phys. Cul.	1904	12	6	.....	.....	1,000
	Sinclair, Robt. J.		Phys. Cul. (Int.)		1915	5½	2	.....	1,300	.....
	McGregor, Enid A.	B.A., McM.	Eng. and Hist.	Phys. Cul.	1915	3½	2	.....	.....	1,000
	Symons, Helen (Int.)	B.A., Tor.	Eng. and Hist., Phys. Cul.		1915	1½	....	.....	.....	850
Toronto, Commerce	Eldon, Robert H.	B.A., Queen's	Math., Com.		1911	25	7	3,200	.....	.....
	Ward, William	B.A., B.Pæd., Qn's	Com.		1911	22	5	.....	2,400	.....
	Fletcher, William H.	M.A., Queen's	Science, Com.		1911	21½	4½	.....	2,400	.....
	Baird, William		Com.		1911	14	4	.....	2,300	.....
	Edward, Wesley G.	B.A., Tor.	Com.		1911	11½	1	.....	2,200	.....
	Bailey, Joseph J.		Com. (Int.)		1911	12½	5	.....	2,200	.....
	Webster, Samuel C.	B.A., Tor.			1911	15	2	.....	2,200	.....

List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917—Continued

High Schools	Names of Teachers	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. and Hor. the Certificate is Intermediate.)	Date of appointment	No. of years' experience in a High School or Coll. Inst.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
Toronto, Commerce, Continued	Conlin, Evelyn E.	B.A., Tor.	Mods. and Hist.		1911	1 4/12	....	.....	.....	2,100
	Van Every, John F.	B.A., Tor.	Eng., Hist., Fr. & Ger.		1912	19	....	.....	2,000	.....
	Harry, Frank T.	.....	Com.		1913	3 3/12	13 4/12	.....	1,900	.....
	Smith, Clayton R.	.....	Art, Com.		1914	8	5	.....	1,800	.....
	Mathieson, Elsie	B.A., Tor.	Eng. and Hist.		1914	6	6	.....	.....	1,700
	Francis, Annie B.	B.A., Tor.	Mods. and Hist.		1915	13 4/12	1	.....	.....	1,700
	Keast, Walter	B.A., Tor.	Math.		1916	10 2/12	5	.....	2,300	.....
	Stockdale, Thomas N.	.....	Phys. Cul., Com. (Int.)	Art.	1916	8	4	.....	1,600	.....
	Hare, Arthur F. (Int.)	.....	Com.		1916	3 1/12	8 5/12	.....	1,600	.....
	Lailey, Marion B.	M.A., Tor.	Phys. Cul. (Int.)		1916	5	....	.....	.....	1,500
	Harvey, Humphrey G. (Int.)	.....	.....	Com.	1916	2/12	8 1/12	.....	1,600	.....
Toronto, North	Reed, George H.	M.A., B.Pæd., Tor.	Classics		1910	28	4	2,700	.....	.....
	Shaw, Robert	B.A., McM., and Tor.	Math.		1913	15	3	.....	2,400	.....
	Clark, Luther J.	B.A., Queen's	Fr. and Ger.		1914	26 1/12	5 4/12	.....	2,400	.....
	Keillor, James	B.A., Queen's	Eng. and Hist.		1915	25	3	.....	2,400	.....
	Nelson, Curtis I.	.....	.....		1916	6	2 1/12	.....	1,800	.....
	Scanlon, Mary G.	.....	Art (Int.)	Phys. Cul.	1911	8	2 1/12	.....	.....	1,700
Trenton	Whyte, Robert	B.A., Tor.	.....		1910	21	4	1,650	.....	.....
	Pattee, Mrs. Ada	.....	Eng. and Hist.		1889	29	....	.....	.....	1,050
	Scott, Jessie M.	.....	.....		1914	5 1/12	3	.....	.....	1,000
	Redmond, Josephine E.	B.A., Queen's	.....		1916	3	2/12	.....	.....	800
Uxbridge	Davidson, John H.	M.A., B.Pæd., Tor.	Math.	Phys. Cul.	1914	14	5	1,600	.....	.....
	Jeckell, Laura M.	.....	.....		1908	9	2 3/12	.....	.....	1,050
	Tobin, Lily S.	B.A., Queen's	.....	Phys. Cul.	1914	2 3/12	3 3/12	.....	.....	800
	Horne, Mrs. Laura E. (Int.)	B.A., Tor.	.....	Phys. Cul.	1916	2 3/12	....	.....	.....	700
	Gould, Elva	.....	.....		1916	7	....	.....	.....	800

Vienna	Foster, Jessie	B.A., Queen's	Fr. and Ger.		1914	15	....	1,100	.....	.....
	Kirk, Gladys R.		Art (Int.)		1914	2½	1	.....	.....	800
Walkerton	Morgan, Joseph	M.A.,Tor.	Classics		1881	35	....	1,600	.....	.....
	McGregor, Margaret C.	B.A., Tor.		Art	1908	9½	1½	.....	.....	1,100
	Cummer, May E.		Com. (Int.)		1909	11½	....	.....	.....	1,200
	Lamont, Alexander D. (Int.)	B.A., Queen's			1916	½	4	.....	1,150	.....
Wallaceburg	Dickenson, Edgar U.	B.A., Tor.		Phys. Cul.	1904	12	3	1,600	.....	.....
	Oldfield, I. Marie	B.A., Tor.		Art, Phys. Cul.	1917	3	....	.....	.....	900
	Fritz, Myrtle E. (Int.)		Com.		1915	1½	½	.....	.....	850
	Wemp, Annie P.		Phys. Cul. (Int.)		1916	3½	2	.....	.....	750
Wardsville	Farrington, Mabel	B.A., Tor.		Phys. Cul.	1916	3½	....	1,200	.....	.....
	Garbutt, Mary M. (Int.)	B.A., Tor.	Math. & Phys.	Phys. Cul.	1916	½	1	.....	.....	700
Waterdown	Ferguson, John	B.A., Queen's			1916	10½	8	1,600	.....	.....
	Gillespie, Grace A. (Int.)	B.A., Queen's		Phys. Cul.	1916	2	½	.....	.....	800
	McGregor, Jean H.		Art (Int.)		1914	3	....	.....	.....	750
Waterford	Rowntree, Annie E.	M.A., Tor.	Mods. and Hist.	Phys. Cul.	1910	6½	5	1,400	.....	.....
	Caverhill, Elsie	B.A., Queen's	Eng. and Hist. (Int.)	Phys. Cul.	1915	4	2	.....	.....	850
	Russell, James W.			Phys. Cul.	1916	2½	....	.....	950	.....
Watford	Steer, Albert B.	B.A., Tor.			1915	8	1	1,500	.....	.....
	McCaw, Hester E. A.	B.A., Tor.	Eng. and Hist.		1912	8½	....	.....	.....	1,050
	Mitchell, Blanche H.			Art	1907	9½	4	.....	.....	1,000
	McKenzie, Russell N. (Int.)	B.A., Tor.	Math. and Phys.	Phys. Cul.	1916	1½	....	.....	1,200	.....
	Matthews, (Capt.) Frank		(Drill Instr.)		1917	....	....	.....	.....	.....
Welland	McCuaig, Herbert M.	B.A., Queen's			1891	32	....	1,800	.....	.....
	Doherty, John C.	B.A., McM.	Science	Phys. Cul.	1913	6	....	.....	1,500	.....
	Thomson, Helen M.	B.A., Tor.	Math.		1908	8	3	.....	.....	1,200
	Brennan, Jennie L.		Art (Int.)		1906	10½	4	.....	.....	1,000
	Ross, Margery E.	B.A., Tor.	Phys.Cul. (Int.), Mods.&H.		1915	2½	....	.....	.....	1,000
	Howie, Mabel F.		Com. (Int.)	Phys. Cul.	1915	5	3	.....	.....	900
	Cinnamon, Mabel A. (Int.)	B.A., Tor.	Mods. & Hist.		1916	½	1	.....	.....	800
Weston	Pearson, Alexander	B.A., Tor.	Science	Agr. and Hor.	1914	23½	....	2,300	.....	.....
	Graeb, Mabel M.	M.A., Tor.	Mods. & Hist.		1911	8½	....	.....	.....	1,200
	Dufton, Lena I.	B.A., Tor.	Classics		1915	8	....	.....	.....	1,250
	McLellan, Mary A. (Int.)	B.A., Tor.	Math. & Phys.	Phys. Cul., Art	1916	1½	....	.....	.....	1,200

List of Principals and Assistants of Collegiate Institutes and High Schools, January, 1917—Continued

High Schools	Names of Teachers	Degrees	Specialists	Elementary and Intermediate Certificates (In the case of Agr. and Hor. the Certificate is Intermediate.)	Date of Appointment	No of years' experience in a High School or Coll. Inst.	No. of years in a Public School	Salaries		
								Principal	Male Assistants	Female Assistants
								$	$	$
Whitby	Johnson, George S.	B.A., McM.	Science		1915	6½	....	1,700	.....	.....
	Adamson, William H. (Int.)	M.A., Queen's	Math.	Phys. Cul.	1915	1½	1	.....	1,200	.....
	Smith, Wallace W. (Int.)	B.A., McM.			1916		4½	.....	1,200	.....
	Guthrie, Ethel R. (Int.)	B.A., Queen's	Mods. & Hist.	Phys. Cul.	1916		....	.....	.....	900
	Sailsbury, M. Orethia		Art (Int.)		1914	3	4½	.....	.....	900
Wiarton	Hamilton, John R.	B.A., Queen's		Phys. Cul.	1912	7½	....	1,700	.....	.....
	Noble, William H. (Int.)				1916		2	.....	900	.....
	McLachlin, Janet E. (Int.)			Art	1915	1½	4	.....	.....	850
Williamstown	Cooke, John A.	M.A., Queen's	Classics		1911	27	3	1,750	.....	.....
	Cattanach, Jessie S.	B.A., Queen's		Phys. Cul.	1910	6½	4½	.....	.....	1,125
	O'Brian, Mabel B.			Art	1909	9½	....	.....	.....	1,075
	Elliott, Clarence (Int.)	B.A., West.		Phys. Cul.	1916		6	.....	1,300	.....
Winchester	Zurbrigg, Jacob M.	B.A., Tor.		Phys. Cul.	1914	7½	....	1,500	.....	.....
	Stenhouse, Rebecca	B.A., McM.			1914	7	3½	.....	.....	1,150
	Rose, Maude L.			Art	1914	4	3½	.....	.....	800
	Graham, Hugh H. (Int.)	B.A., McM.	Science	Ag.&Hor., P.C.	1915	1½	1	.....	1,200	.....
Wingham	Smith, George R.	B.A., Tor.	Math.		1911	5½	3½	1,600	.....	.....
	Anderson, John A. (Int.)	B.A., Queen's			1915	1½	4½	.....	1,400	.....
	Butcher, Frank H. (Int.)	B.A., Tor.	Classics		1916		....	.....	1,200	.....
	Whyte, Marion I.	B.A., Tor.	Mods. and Hist.	Phys. Cul.	1913	6½	1	.....	.....	1,100
	Garrett, Evelyn C.			Art	1915	6	3	.....	.....	900

SUMMARY, COLLEGIATE INSTITUTES AND HIGH SCHOOLS, JANUARY, 1917

Number of Schools, Sex of Teachers, and Percentages

Schools

Collegiate Institutes	48
High Schools	113
Total	161
Increase for the year	1

Teachers

Men	554
Women	484
Total	1,038

Percentages

January, 1917:	Men,	53.37;	Women,	46.62
" 1916:	"	55.00;	"	45.00
" 1914:	"	59.27;	"	40.72
" 1909:	"	67.55;	"	32.45
" 1904:	"	78.80;	"	21.20

Number of Teachers

Collegiate Institutes

Principals	48
Assistants	522
Total	570

High Schools

Principals	113
Assistants	355
Total	468

Grand Total

Principals	161
Assistants	877
Grand Total	1,038
Increase for the year	18

Salaries

Collegiate Institutes

Highest Salary	$3,500
Average " Principals	2,276
" " Male Assistants	1,738
" " Female "	1,308
Average Salary	$1,617
Increase for the year	31

High Schools

Highest Salary	$3,200
Average " Principals	1,653
" " Male Assistants	1,448
" " Female "	983
Average Salary	$1,242
Increase for the year	9

Collegiate Institutes and High Schools

Highest Salary	$3,500
Average " all Principals	1,839
" " all Assistants	1,376
Average Salary, all	$1,448
Increase for the year	18
Average Salary, Male Assistants	$1,667
" " Female "	1,133
Increase for year, Principals	$26
" " Male Assistants	33
" " Female "	24

University Graduates, Specialists, etc.

Collegiate Institutes and High Schools

Graduates	752
Non-Graduates	286
Percentage of Graduates, 1917	72.44
Percentage of Graduates, 1916	71.37
Percentage of Non-Graduates, 1917	27.55
Percentage of Non-Graduates, 1916	28.62
Interim Certificates	234
Specialists	469
Interim Specialists	240
Percentage of Specialists and Interim Specialists, 1917	68.30
Percentage of Specialists and Interim Specialists, 1916	64.60
Percentage of Non-Specialists, 1917	31.69
Percentage of Non-Specialists, 1916	35.39
Teachers holding Elementary or Intermediate Certificates	299

APPENDIX V

PROVINCIAL NORMAL AND MODEL SCHOOLS.

I. Normal School, Hamilton

Staff, January, 1917.

S. A. Morgan, B.A., D.Pæd ..... Principal: Science of Education.
F. F. Macpherson, B.A. ..... Master: English.
E. T. Seaton, B.A. ..... Master: Mathematics.
J. Voaden, M.A. ..... Master: Science and Geography.
G. O. McMillan, M.A., B.Pæd ..... Master: Nature Study and Agriculture.
A. J. Painter ..... Instructor: Manual Training.
Julien R. Seavey ..... Instructor: Art.
Miss Clara E. Elliott ..... Instructor: Household Economics.
*H. A. Stares, Mus. Bac ..... Instructor: Music.
†Sergt.-Maj. Jesse Skinner ..... Instructor: Physical Culture.
Oscar Main ..... Instructor. Writing.

* Leave of absence granted to accept a commission as Lieutenant and the position of bandmaster in the 80th Battalion for Overseas Service, December 28th, 1915.
† Granted leave of absence for Active Service, March 17, 1915.

Students admitted, Session 1916-1917

Male	19
Female	173
Total	192

II. Normal School, London

Staff January, 1917.

S. J. Radcliffe, B.A. ..... Principal: English.
John Dearness, M.A ..... Master: Science and School Management.
A. Stevenson, B.A. ..... Master: Science of Education and Grammar.
E. T. White, B.A., B.Pæd ..... Master: Mathematics and History.
G. W. Hofferd, B.A. ..... Master: Science and Geography.
Sugden Pickles ..... Instructor: Manual Training.
S. K. Davidson ..... Instructor: Art.
Miss A. B. Neville ..... Instructor: Household Economics.
C. E. Percy ..... Instructor: Music.
Albert Slatter ..... Instructor: Physical Culture.
J. W. Westervelt ..... Instructor: Writing.

Students admitted, Session, 1916-1917

Male	26
Female	163
Total	189

III. Normal School, North Bay

Staff, January, 1917

A. C. Casselman ..... Principal: History, History of Education, Reading.
J. C. Norris, M.A., B.Pæd. ..... Master: Mathematics.
J. B. McDougall, B.A. ..... Master: Science of Education and English.
H. E. Ricker, M.A. ..... Master: Science.
J. E. Chambers ..... Instructor: Manual Training.
C. Ramsay ..... Instructor: Art.
Miss Mayme C. Kay ..... Instructor: Household Economics.
Herbert Wildgust, L.L.C.M. ..... Instructor: Music.

Students admitted, Session, 1916-1917

Male	18
Female	107
Total	125

IV. Normal School, Ottawa

1. Staff, January, 1917

J. F. White, LL.D.	Principal : School Management and English.
W. J. Karr, B.A., B.Pæd.	Master : Science of Education and English.
J. W. Forbes, B.A.	Master : Mathematics, History, and Hygiene.
G. A. Miller, M.A.	Master : Science and Nature Study.
F. A. Jones, B.A.	Master : Grammar, Geography, and History of Education.
Miss Eliza Bolton	Instructor : Kindergarten Principles.
J. S. Harterre	Instructor : Manual Training.
Roy F. Fleming	Instructor : Art.
Miss C. E. Green	Instructor : Household Economics.
T. A. Brown	Instructor : Music.
C. Emery	Instructor : Physical Culture.

Students admitted, Session, 1916-1917

Male	12
Female	173
Total	185

2. Staff of Normal Model School, Ottawa, January, 1917

C. E. Mark, B.A.	Acting Headmaster, IV and III Form, Boys.
H. M. Leppard	III Form, Boys.
C. P. Halliday (on active service)	II Form, Boys (Mrs. F. Carter acting).
Miss E. V. Phillips	Pt. II, Boys.
M. C. Runians, B.A.	I Form, Boys.
Miss M. E. Butterworth (on leave, Miss Hanahoe acting).	
Miss A. G. Hanahoe	First Female Assistant.
Miss J. Foster	III Form, Girls.
Miss A. Delaney	II Form, Girls.
Miss E. Cluff, B.A.	Pt. II, Girls.
Miss M. R. Elliott	I Form, Girls.
Miss Eliza Bolton,	Kindergarten Directress.
Miss A. H. Baker	Kindergarten Assistant.
J. S. Harterre	Instructor : Manual Training.
Roy F. Fleming	Instructor : Art.
Miss C. E. Green	Instructor : Household Economics
T. A. Brown	Instructor : Music.
C. Emery	Instructor : Physical Culture.
J. M. Fleury	Instructor : French.

Number of pupils, 1916	396
Number of Kindergarten pupils, 1916	52
Total	448

V. Normal School, Peterborough

Staff, January, 1917

Duncan Walker, B.A.	Principal : Mathematics.
Henry G. Park, B.A., D. Pæd	Master : Science of Education and English.
Miss Muriel G. Oakley	Master : English.
W. I. Chisholm, M.A.	Master : Science.
Elmer E. Ingall, B.A.	Master : English.
A. F. Hagerman	Instructor : Manual Training.
Miss Jessie C. McRae	Instructor : Art.
Miss Edna Ferguson	Instructor : Household Economics.
Miss Marion R. Rannie	Instructor : Music and Physical Culture.
John A. McKone	Instructor : Writing.

Students admitted, Session 1916-1917

Male	15
Female	161
Total	176

VI. Normal School, Stratford

Staff, January, 1917

S. Silcox, B.A., D.Pæd	Principal:	Science of Education, Hygiene and Spelling.
J. W. Emery, B.A., D. Pæd	Master:	Science, Nature Study and Agriculture.
J. D. Campbell, B.A.	Master:	Mathematics, History of Education, History.
* H. V. Pickering, M.A., Ph.D	Master:	
H. G. Martyn, B.A.	Master:	Grammar, Literature and Reading.
V. K. Greer, M.A.	Master:	Composition, Geography, School Management.
Sugden Pickles	Instructor:	Manual Training.
Mrs. Helen Mayberry	Instructor:	Art.
Miss A. Neville	Instructor:	Household Economics.
J. Bottomley, A.R.C.O.	Instructor:	Music.
Miss E. M. Cottle	Instructor:	Physical Culture, Writing, and Bookkeeping.

* Leave of absence granted to accept a commission as Lieutenant in 110th Perth Battalion for Overseas Service, Dec. 17th, 1915.

Students admitted, Session 1916-1917

Male	23
Female	140
Total	163

VII. Normal School, Toronto

1. Staff, January, 1917

Wm. Scott, B.A.	Principal:	History of Education and School Management.
Wm. Prendergast, B.A., B.Pæd	Master:	Mathematics and English.
David Whyte, B.A.	Master:	Science.
R. H. Walks, B.A	Master:	English.
S. J. Keyes, B.A., B.Pæd.	Master:	Science of Education and Reading.
R. W. Murray (on leave, Mr. Stubbs acting)		
S. J. Stubbs, B.A.	Master:	Grammar and Geography.
Miss Mary E. Macintyre	Instructor:	Kindergarten Principles.
Miss Ellen Cody	Instructor:	Kindergarten Assistant.
Jas. H. Wilkinson	Instructor:	Manual Training.
Miss A. Auta Powell	Instructor:	Art.
Miss Nina A. Ewing	Instructor:	Household Economics.
Mrs. Emma Macbeth (on leave, Miss Lean acting)		
Miss M. Lean	Instructor:	Needlework.
A. T. Cringan, Mus. Bac	Instructor:	Music.
Miss Miriam Thompson	Pianist.	
Mrs. Jean Somers	Instructor:	Calisthenics.
Capt. E. H. Price, S. of M	Instructor:	Drill.
A. F. Hare	Instructor:	Writing.
Mrs. M. W. Brown	Instructor:	Reading.

Students admitted, Session, 1916-1917

Male	24	
Female	212	
		236
Kindergarten—Primary Students		27
Total		263

2. Staff of Normal Model School, Toronto, January, 1917

Milton A. Sorsoleil, B.A.	Acting Head Master.
Miss M. Meehan (on leave, Miss Caulfeild acting)	
Miss M. K. Caulfeild	First Female Assistant.
J. T. Mustard	First Male Assistant.
Mrs. L. Spence	Assistant.
Francis M. McCordic	Assistant.
Miss A. F. Laven	Assistant.
John E. Montgomery	Assistant.

Miss C. E. Kniseley ..... Assistant.
Miss Isabella Richardson ..... Assistant.
Miss Alice A. Harding ..... Assistant.
Miss Lilian B. Harding ..... Kindergarten-Primary.
Miss Mary E. Macintyre ..... Kindergarten Directress.
Miss Ellen Cody ..... Kindergarten Assistant.
Jas. H. Wilkinson ..... Instructor: Manual Training.
Miss A. Auta Powell ..... Instructor: Art.
Miss Nina A. Ewing ..... Instructor: Household Economics.
Mrs. Emma Macbeth (on leave, Miss Lean acting)
Miss M. Lean ..... Instructor: Needlework.
A. T. Cringan, Mus. Bac. ..... Instructor: Music.
Miss Miriam Thompson ..... Pianist.
Mrs. Jean Somers ..... Instructor: Calisthenics.
Capt. E. H. Price, S. of M ..... Instructor: Drill.
Mrs. G. de Lestard ..... Instructor: French.

Number of pupils in 1916	487
Number of Kindergarten pupils in 1916	36
Total	523

VIII. Summary of Attendance at the Normal Schools

Normal Schools	Total attendance	Male students	Female students
Hamilton	192	19	173
London	189	26	163
North Bay	125	18	107
Ottawa	185	12	173
Peterborough	176	15	161
Stratford	163	23	140
Toronto	236	24	212
Totals	1,266	137	1,129

[1] Kindergarten-Primary students, Toronto 27

NOTE.—A Model School is also conducted in the North Bay Normal School building.

APPENDIX W

ONTARIO SCHOOL FOR THE DEAF

ANNUAL REPORT OF THE SUPERINTENDENT

To the Honourable R. A. Pyne, M.D., LL.D., M.P.P.,
Minister of Education for Ontario:

Sir,—In presenting to you the annual report of the Ontario School for the Deaf for the year ending October 31st, 1916, I am pleased to state that the work of the School for the year just ended has been quite satisfactory, war conditions considered.

The Attendance

During the session, 1915-16, the attendance reached the highest total in years, if not in the history of the school, being in December 275, consisting of 143 boys and 132 girls. Owing to various causes this attendance fell off during the remaining months of the session and school closed in June with only 259 pupils on the roll. The chief causes for this were the sending home of our senior class on account of two teachers enlisting for active service, and the returning home of a number of pupils on account of illness. During the vacation a number of pupils, unable to make sufficient progress to warrant keeping them longer, were written off and their parents advised to put them to work. In addition to these, a number of others who should have returned to school were, on account of the scarcity of help and the high wages prevailing in all callings, not returned to school and the session opened with an attendance of 245 pupils, 122 boys and 123 girls. This number has increased since the opening and it is expected the average for the year will be about 250 pupils.

The Expenditure

During the year just closed, as in previous years, the expenditure has been closely watched. We did not hope to keep it down to the level of that of former years on account of the well known advance in the prices of all supplies and, as expected, the aggregate is considerably over that of the previous year. With existing conditions no other result was possible without impairing the efficiency of the work, which would have been a serious mistake. If any assurance is required of the care exercised in all departments it may be had from a comparison of the Bursar's analyzed statement of the year 1916 with those of previous years, and this purpose may be best served by comparing the weekly cost per pupil for 1916 with that for 1905, a year antedating the improvements which have been since effected, such as new buildings with consequent increase in fuel, light, service, etc., the enlarging of the staff to obtain greater efficiency by smaller classes and more individual work, the introduction of the oral method, and the more and better school equipment required for a higher standard of work, all of which were necessarily attended with additional outlay. Of the nineteen headings under which

this expenditure is analyzed, three remain unchanged, ten show decreases while only six show increases. The six headings showing increases are butcher's meat, butter and milk, fruit and vegetables, books and apparatus, fuel, and salaries and wages, and these when examined individually will show either greatly increased prices or improvement in service, or both. The average contract price of butcher's meat in 1905 was $5.71 per cwt., and that in 1916 was $12.75, showing an increase of 123 per cent. The average price of butter in 1905 was 22½c. per lb., and in 1916 it was 33c., showing an increase of 46 per cent. In the case of fuel there was paid out of the 1916 appropriation a deficit that was left over from 1915 and in view of the possible coal shortage an extra supply was provided for 1917 and there was also an increase in the cost per ton as well. Under the heading of salaries and wages for 1916 are included extraordinary amounts on account of the war and illness of members of the staff. In January, four of our staff enlisted and their salaries were continued throughout the year. About the same time two of our teachers became ill and were off duty for some time and substitutes had to be provided. The amount thus paid was $2,978.12 and if this be deducted from the total it will reduce the weekly cost of this item for 1916 to $2.50, an increase of only 17.8 per cent. over that of 1910, which, when conditions are considered, is very moderate indeed. The other headings will similarly show uncontrollable advances in cost or ample justification by the quality of service. There has been in addition a very considerable increase in salaries, the standard having been raised from time to time in conformity with the general increase throughout the country.

Comparison of Weekly Cost per Pupil for the Years 1905 and 1916 as per Bursar's Statements

	1905.	1916.
Medical Department	$0.03	$0.01
Butcher's meat	.27	.34
Flour	.12	.12
Butter and milk	.21	.34
General groceries	.23	.23
Fruit and vegetables	.07	.11
Bedding and clothing	.06	.04
Fuel	.58	.93
Light	.08	.06
Laundry	.07	.07
Books and apparatus	.04	.08
Printing, postage, etc.	.08	.03
Furniture	.06	.02
Farm	.09	.06
Repairs	.10	.05
Sewage Works	.03	.01
Water	.08	.07
Miscellaneous	.10	.08
Salaries and wages	2.12	2.72
Total	$4.42	$5.37

The conditions that have caused the increase in expenditure during the year covered by this report, continue to be in operation in the same direction to an even greater degree, so that the outlays for the coming year will inevitably require additional appropriations. In this connection I would respectfully submit that it is only fair, in view of the high cost of living and the abundant prosperity of the country, that our staff be given increases in salaries sufficient to at least partially offset the enhanced cost of living.

The Work of the Session

The session of 1915-16 was an uneventful one in most regards, so that there is little that calls for comment or is worthy of record. The most important occurrences, so far as it affected our school, were connected with the great world-war, which seems to touch so intimately every phase of life and every possible human interest. In February, two of our teachers, Mr. Ingram and Mr. Pratt, enlisted, also Mr. Parks, our instructor in carpentry. These vacancies in our teaching staff it was impossible to fill at the time, so it was necessary to send home our High School class, much to our regret and theirs. These conditions were further aggravated by the absence for several weeks, through illness, of two of our teachers, and it was with difficulty that their places were temporarily filled. For it must be remembered that we have no reserve of qualified teachers to draw from, as is the case in hearing schools, for even an experienced and successful Public or High School teacher requires several years of training before becoming a competent teacher of the deaf. One teacher who enlisted was also the instructor in manual training, so, as a substitute could not be found, this department of our work has been temporarily discontinued. The place of the carpenter has, for the time being, been taken by his father, who is a skilled mechanic. In addition to those named above, our messenger, Fred White, enlisted and is now at the front. Despite these several drawbacks very good work was done throughout the session, and the record for the year was, in most respects, quite up to the standard of previous years.

Our High School Entrance Class last year was the smallest that we have yet had. It consisted of only five pupils, four of whom were successful, one getting an average of over eighty per cent. Three of these have returned and are taking advanced work. At the present time we have two entrance classes, a manual class of seven pupils, and an oral class of twelve. The latter, on the average, are considerably younger than the members of any previous class, but we are hopeful that a fair proportion of them, as well as of the manual pupils, who are older, will be successful in passing the Entrance Examination.

This session we are trying out with two of our beginning classes the Montessori method, modified and adapted to the condition and needs of deaf pupils, but it is too soon as yet to judge as to its suitability to the deaf.

In October, we were favoured with a visit from the Public School teachers of Kingston and Frontenac, to the number of about one hundred and fifty. They spent several hours at the school, seeing as much of our work as was possible in the limited time at their disposal. It is needless to say that they were deeply interested in our methods of instruction here, and surprised at the results attained with pupils handicapped by the loss of their hearing. They were especially pleased with the co-ordination of academic education and industrial training carried on here, with its effective working out in a high degree of mental development and technical skill, and the consequent preparation of the pupils for earning a competent livelihood when they leave school. This sentiment was well expressed by Mr. Stuart, Public School Inspector for Kingston. After expressing the gratitude they all felt for the reception given them and their gratification at what they had witnessed, he said that before they had left Kingston they had been told that they would, of course, have a good time, but would not learn anything of practical value. The first statement was true, for they certainly had had a good time. But the second prediction was far astray, for they had all received not

only a great inspiration, but much definite instruction as well. One thing, especially, had impressed him. The children here are handicapped by being deprived of their hearing, yet in such a school as this the pupils have many advantages over and above what hearing children have, because they get an industrial training in addition to the regular school instruction. In future, even in schools for normal children, pupils should get a training that would enable them to make a living. At the present the pupils are allowed to drift out of school with a very inadequate preparation for any vocation in life, and he hoped to see the time when this would cease to be.

Such visits as these from men and women who are themselves engaged in educational work are productive of good in many ways and are to be encouraged. They stimulate our own pupils and staff. They give some degree of inspiration and helpfulness to the visitors, in a way thus happily expressed by Rev. Dr. Baker, Principal of Albert College, who was present as a guest. The previous speakers, he said, had spoken of learning something. He thought they had learned something, and when they went back to their schools they would take hold again of that dull boy, whom they had set aside and try to make something of him. They, as teachers, should pay special attention to the boy or girl who is handicapped in any way, who has great difficulties to contend with. And lastly, they create an interest in the deaf among all the visiting teachers, some of whom may be the means of having some deaf child sent to school here, who might otherwise have been left uneducated. We might add that the visitors showed their appreciation of what they had seen, and the warm interest aroused, by subscribing for one year for some sixteen or eighteen magazines and other periodicals suitable for boys and girls, for which we wish hereby to place on record our sincere and hearty thanks.

Lip Reading for Deaf Soldiers

During the vacation Miss Deannard was sent to Boston to take a special course for the teaching of lip-reading to adult deaf with a view of teaching it to any soldiers returning from the war incapacitated by deafness. Fifteen of our teachers have since been instructed in this method and the school is now prepared to render any assistance that the Hospital Commission may require in this way.

Appended hereto will be found the reports of Mr. H. J. Clarke, official examiner and Dr. Boyce, the attending physician.

I have again to express my appreciation of the work of the staff, every member of which has been faithful to the best interests of the pupils and to again thank you, sir, and Dr. Colquhoun for the courtesy and assistance given us at all times.

I have the honour to be,

Sir,

Your obedient servant,

C. B. COUGHLIN,

Superintendent.

Belleville, October 31st, 1916.

PHYSICIAN'S REPORT

THE HONOURABLE R. A. PYNE, M.D., LL.D.,
Minister of Education for Ontario:

SIR,—In making my report on the health conditions of the Ontario School for the Deaf for the past year I regret to say that we had a good deal of sickness, some of a very serious form.

In the early part of the session we usually have a good many children ailing in various ways. The splendid sanitary conditions and healthful environment that prevail here, and the careful supervision and regulation of habits of life soon work improvement in the general health of these children.

Realizing the importance of preventing the development of infectious diseases where such a large number of children are congregated, careful and earnest attention is given at the beginning of every school term, that nothing be left undone to prevent it. The children, their clothing, trunks, etc., are carefully examined, and as much information obtained regarding the health conditions of their homes as possible. Notwithstanding our best endeavours we continue to have from time to time epidemics of sickness.

In the month of December, 1915, we had three cases of typhoid fever, all being severely sick but eventually recovering. During the convalescing stage, one patient, Annie Walters, developed pulmonary trouble and she returned home where she afterwards died. The water supply, while not being absolutely pure, was considered safe to use, but as a precaution was boiled previous to using. Blood tests were made of all the pupils, the attendants and officers with the result that several gave the typhoid reaction and means were adopted to prevent any further spread of the disease. The three cases mentioned were all we had.

In January, we had a regular epidemic of lagrippe. A great many cases were down with it, confined to bed for a few days and taxing the capacity of the hospital. The individual cases were usually of short duration and mild, and generally free from complications. Only two cases of pneumonia resulted but they recovered in the ordinary time.

At about this time we had two very severe and dangerous cases of appendicitis and two mild cases, the latter quickly recovering. The severe cases were Gladys Blais and John Narrie. They were operated on at Belleville General Hospital, and, after a long and dangerous sickness accompanied with much suppuration, recovered. These were the only cases of appendicitis that have occurred at this school in many years.

In January and February we had chicken-pox. These cases required only ordinary care and good nursing with confinement to bed. We had not very many cases as many of the children were rendered immune by previously having had the disease.

In the latter part of the session measles broke out in the school. At this time it was epidemic throughout most of the Province. For a long time the children were detained from leaving the school and going into the town, with the object of avoiding any contact that might start an epidemic, but eventually it broke out and we had sixty-four cases. Some were severely sick, a number with broncho-pneumonia, and some of the pupils not naturally robust remained anaemic and debilitated for some time. Generally, however, the type of the disease was mild. The large number of cases made it necessary to use some of the

dormitories, the hospital being inadequate. At the close of school some of the measles cases were still in quarantine and were obliged to remain some time after the others had returned home.

These epidemics just reported on, constituted in the main the sickness that prevailed during the past year.

Individual cases crop up from time to time and are always to be expected in a school of over 250 pupils. Functional and dietetic disorders are not uncommon. Minor accidents occur occasionally. Constitutional and hereditary tendencies have to be combated. The good living and systematic regulation of all the habits of life, abundance of fresh air, proper attention to ventilation and regular exercise such as exist here, lay a foundation for a healthy and vigorous future.

Among the officers, teachers and employees there has been little serious sickness. Mr. Minns, the boys' supervisor, was down with pneumonia but made a good recovery.

At the opening of the present term we had a number of children with general debility and malnutrition but they quickly showed marked improvement, and at present the general health in the school is satisfactory.

I have the honour to be,

Sir,

Your obedient servant,

W. W. Boyce, M.B.,
Attending Physician.

Belleville, November 1st, 1916.

LITERARY EXAMINER'S REPORT

To the Honourable R. A. Pyne, M.D., LL.D.,
Minister of Education for Ontario:

Sir,—In accordance with your instructions, I have inspected the Literary Classes at "The Ontario School for the Deaf," and I beg to submit my report for your consideration. The inspection was made on April 4, 5, 6, 7, 10 and 11.

This School naturally divides itself into two sections, the Oral and the Manual Departments, and while the Course is as nearly as may be the same, there are differences that will appear as I proceed.

The Oral Department has a Course of Study covering nine regular grades and a preparatory grade. (Some of these grades are not represented in the Manual Department.) The Oral Department for purposes of supervision is again graded as Junior and Senior Oral. In the Senior Oral Department the Course of Study conforms very closely to that in the Public Schools. As the great problem is to develop language, this subject is stressed throughout the whole course, and especially so in the junior grades, for it must be kept in mind that these children come to school as a rule without a word to express their ideas. It will not be necessary to outline the work covered in the senior grades, suffice it to say that for two years now this school has had pupils who attained to the standard of Junior High School Entrance, and demonstrated the fact by passing a very creditable examination. I will, however, outline briefly the work covered

in the Junior Oral Department, and this will give you a fair idea of the thoroughness of the whole course.

In the Preparatory Grade, the work is largely sense-training to develop powers of attention, observation and imitation, through the cultivation of sight and touch, by exercises in motion, form, colour and number, and simple games. Form is taught by stick and splint laying, etc. These little tots learn to recognize small numbers, but no attempt is made to teach them the combinations at this stage. They are given frequent breathing exercises, and speech-work and speech-reading is begun. They learn to make the elementary sounds, they also learn to speak and lip-read about 70 names of common objects, 15 verbs, the personal pronouns, and the numerals to 10, and in addition, their names and those of their classmates and several commands. They spend one hour a week at manual training.

Grade I

Language, oral and written.

Preparatory work is reviewed. The vocabulary is enlarged by about 275 new nouns, 60 adjectives, 75 verbs used in the past and future tenses and in both the positive and negative forms, the numerals to 100, the personal pronouns in both numbers and all cases, the articles, commoner prepositions, the use of interrogative forms, the use of sentence forms with the verb intransitive or transitive, and compound sentences. Conversational phrases are stressed. Time phrases and calendar work is taken, also journal work and letter-writing. In numbers, the combinations to 10 are taught. The pupils get constant drill in articulation and speech-reading, and frequent lessons in the reading of short stories from charts.

Grade II

Review all the work of Grade One. Teach prepositional phrases and the rest of the commonly occurring prepositions; extend vocabulary by the names of birds, animals and their young, furniture, etc.; the use of "ask and tell." Original work such as journals, topics, letters, etc. All written work to be done on the five slates. Story work is extended by simple dramatization. In number, the combinations to twenty are taught, and addition and subtraction are begun. Daily drill is given in speech and speech-reading. Manual training for one hour per week.

Grade III

Here the vocabulary is again enriched by the names of the various occupations and trades, the use of "so, why, when, etc.," all the forms of "ask and tell," the present and past progressive forms of the verb, "saw and heard" with the participle, etc. Compositions on topics and picture descriptions are also taken. In Arithmetic, addition and subtraction are further taught, and the multiplication table to six times twelve. Geography is begun.

This completes the work of the Junior Orals, and when it is remembered that these children have only what the teacher gives them, I think you will agree that this is a pretty full course. As I said before, the rest of the course follows very closely the Public School Course of Study, with a strong emphasis on language.

I visited every class and was delighted with the progress evident since my last inspection. Coming here as I have for a number of years as examiner, I am able to see the improvements that could not be evident to anyone who was visiting for the first time, but I am confident that any examiner would at once see that

the classes have been well and carefully taught. The work of inspection becomes each year more like that of an ordinary school, possibly because I am more familiar with the work, but this is not the whole reason, for the school is certainly advancing rapidly, and the special students of this branch of our educational problem in Ontario have beyond question made great progress in the last few years.

Early in the school year the organization was improved by the addition of three young ladies who are doing satisfactory work. They are all three university graduates, and with a little more experience in this work should add materially to the strength of the staff. At present, the organization is somewhat disarranged by the fact that two of the staff, Mr. Ingram and Mr. Pratt, have answered their country's call and are in khaki ready to do their duty in her defence. During the year, Miss James was incapacitated by reason of illness and one of the recent graduates, Miss Evelyn Hazlitt, is supplying in her absence and her work is apparently good.

The discipline is, as far as my observations and inquiries can indicate, of a high order. The unanimous statement of those I have interviewed in the matter, is that there is no trouble with discipline. I have yet to see any case requiring serious consideration, and I have seen a good deal of these pupils, both in school and at play.

In a staff as efficient as is this, it would not be well to mention individual classes, although I am tempted to do so for some of them did work that pleased me very much, but then they all do remarkably well. I do wish, however, to mention the fact that the answers I was able to get in the classes of the senior grades, both Orals and Manuals, show the advantages that are accruing to these pupils from the reading they are doing outside of the school room. Several of the upper grades read with interest works in English Literature, and the result is seen in their increasing ability to use language.

I have taken fairly full inspection notes, but owing to the fact that there will be a final test in many of the classes at the close of the term, I did not make my inspection of the nature of a written examination, to which definite values in percentages might be attached, but I am quite sure that I have a fair opinion of the nature of the work being done, to me more satisfactory than a written test, and I have no hesitation in saying that the good work of former years is being maintained, and that the general average is higher than I have found it in former years.

The Entrance Class this year is smaller than former classes, but they are working hard to equal the record of former classes.

In concluding this report, I wish to thank the Superintendent, officers and staff for their kindness and courtesy to me while in the discharge of my official duties. Every opportunity was given me to look into the work of the school as I deemed best, and I hope my six days spent among the classes have been of profit to the school.

I have the honour to be,

Sir,

Your obedient servant,

H. J. Clarke, B.A.,
Literary Examiner.

Belleville, April 12th, 1916.

Officers of the School

C. B. Coughlin, M.D. ..... Superintendent.
J. W. Pearce ..... Bursar.
W. W. Boyce, M.D. ..... Physician.
Miss E. A. Willoughby ..... Matron.
Miss J. C. Bradley ..... Domestic Science Teacher and Assistant Matron.

Teachers

Manual	Oral
Miss G. Linn, Supervising Teacher, Manual Department.	W. J. Campbell, Supervising Teacher, Senior Oral Department.
D. R. Coleman, M.A.	Miss C. Ford, Supervising Teacher, Junior Oral Department.
Mrs. Sylvia L. Balis.	Geo. F. Stewart.
Miss Ada James.	Miss S. Templeton.
Miss Mary Bull.	Miss L. Deannard.
Miss Nina Brown.	Miss C. Haynes.
	Miss I. B. Palen.
	Miss B. Rierdon.
	Miss F. Cross.
	Miss I. Aherne, B.A.
	Miss W. Armstrong, B.A.
	Miss E. Panter, B.A.
	Miss M. Wheeler.
	Miss S. Keating.
	Miss F. Curry.
	Miss M. Hitchcox.

Domestic Science ..... Miss J. C. Bradley.
Fancy Work ..... Miss M. Bull.

Miss I. McBride ..... Clerk.
Miss C. Coombe ..... Trained Nurse.
Mrs. L. G. Williams ..... Teacher of Sewing.
Wm. Nurse ..... Storekeeper and Assistant Supervisor of Boys.
W. S. Minns ..... Supervisor of Boys.
Chas. R. Ford ..... Printer and Instructor in Printing.
A. Morrice ..... Shoemaker and Instructor in Shoemaking.
J. Boyd ..... Baker and Instructor in Baking.
W. E. Parks ..... Carpenter and Instructor in Carpentering.
C. J. Peppin ..... Engineer.

Number of Pupils in Attendance each Official Year since the Opening of the School

	Male	Female	Total
From October 27th, 1870, to September 30th, 1871	64	36	100
" " 1st, 1871, " 1872	97	52	149
" " 1872, " 1873	130	63	193
" " 1873, " 1874	145	76	221
" " 1874, " 1875	155	83	238
" " 1875, " 1876	160	96	256
" " 1876, " 1877	167	104	271
" " 1877, " 1878	166	111	277
" " 1878, " 1879	164	105	269
" " 1879, " 1880	162	119	281
" " 1880, " 1881	164	132	296
" " 1881, " 1882	165	138	303
" " 1882, " 1883	158	135	293
" " 1883, " 1884	156	130	286
" " 1884, " 1885	168	116	284
" " 1885, " 1886	161	112	273
" " 1886, " 1887	151	113	264
" " 1887, " 1888	156	109	265
" " 1888, " 1889	153	121	274
" " 1889, " 1890	159	132	291
" " 1890, " 1891	166	130	296
" " 1891, " 1892	158	127	285
" " 1892, " 1893	162	136	298
" " 1893, " 1894	158	137	295
" " 1894, " 1895	160	135	295
" " 1895, " 1896	173	137	310
" " 1896, " 1897	164	128	292
" " 1897, " 1898	167	138	305
" " 1898, " 1899	161	132	293
" " 1899, " 1900	152	130	282
" " 1900, " 1901	157	143	300
" " 1901, " 1902	147	141	288
" " 1902, " 1903	140	143	283
" " 1903, " 1904	137	134	271
" " 1904, " 1905	130	138	268
" " 1905, " 1906	116	143	259
" " 1906, " 1907	126	145	271
" " 1907, " 1908	133	143	276
" " 1908, to October 31st, 1909	130	151	281
" November 1st, 1909, " 1910	143	149	292
" " 1910, " 1911	138	143	281
" " 1911, " 1912	135	126	261
" " 1912, " 1913	139	129	268
" " 1913, " 1914	152	144	296
" " 1914, " 1915	156	160	316
" " 1915, " 1916	158	152	310

List of Pupils in the Ontario School for the Deaf for the Year ending October 31st, 1916

County, Etc.	P.O. Address.
Algoma District:	
Broad, Russell	Sault Ste. Marie.
Donovan, Ellen	Steelton.
Matheson, Beatrice	Sault Ste. Marie.
Parr, Joseph	Sault Ste. Marie.
Sinclair, Blanche	Sault Ste. Marie.
Toppazzini, Albert	O'Donnell.
Alberta, Province of:	
Nouak, Nick	Calgary.
Pierce, Gordon	Chauvin.
Talbot, Hartley	Calgary.
Addington:	
Hirons, George	Enterprise.

List of Pupils in the Ontario School for the Deaf—Continued.

County, Etc.	P.O. Address.
British Columbia, Province of:	
Moreland, Jack	Summerland.
Brant:	
Moosian, Sophie	Brantford.
Moors, Grace	St. George.
Moors, Beatrice	St. George.
McKenzie, Robert	Harley.
Reid, James	Brantford.
Stegmeir, May	Brantford.
Tate, Mary	Brantford.
VanSickle, Lara	Cainsville.
Bruce:	
Baker, John	Southampton.
Ballagh, Edith	Teeswater.
Crowe, Robert	Dobbinton.
Damm, William	Walkerton.
Green, James	Chesley.
Keyes, May	Hepworth.
McKee, Carl	Pinkerton.
McKee, Maud	Pinkerton.
Rourke, Melville	Tara.
Ross, Lauredith	Teeswater.
Voisin, John	Formosa.
Carleton:	
Brigham, Thomas	Ottawa.
Blanchard, Victor	Cumming's Bridge
Cocker, Edward	Ottawa.
Dallaire, Romeo	Ottawa.
Dunn, John	Ottawa.
Delinelle, Victor	Ottawa.
Delinelle, Lauretta	Ottawa.
Huband, Gerald	Ottawa.
Pallesteur, Louis	Ottawa.
Pittaway, Audrey	Ottawa.
Pommerville, Eva	Ottawa.
Radmore, Frank	Ottawa.
Savard, Paul	Cumming's Bridge
Towns, Dora	Laurentian View.
Dundas:	
Beckett, Sam	Chesterville.
Ford, Clarice	Mountain.
Dufferin:	
Bell, George	Riverview.
Boyle, Lizzie	Waldemar.
Middleton, Helen	Shelburne.
Smith, Gordon	Riverview.
Durham:	
Brittain, Marjorie	Port Hope.
Essex:	
Bennie, James	Leamington.
Fairful, Maisie	Leamington.
Kerr, Avis	Elmstead.
Penprase, Alfred	Elmstead.
Payne, Eddie	Walkerville.
Watkins, Hazel	Windsor.

County, Etc.	P.O. Address.
Elgin:	
Caves, Jessie	St. Thomas.
Gwalter, Harry	St. Thomas.
Gwalter, Fred	St. Thomas.
Hammond, Catherine	St. Thomas.
Henderson, Gordon	St. Thomas.
Paul, Edward	St. Thomas.
Penny, Daisy	St. Thomas.
Frontenac:	
Charleton, Archie	Kingston.
Gilmour, Maud	Kingston.
Grey:	
Brown, Thomas	Markdale.
Brown, Alma	Markdale.
Kinsman, Mary	Proton.
Locke, Beth	Owen Sound.
Wilson, Beulah	Markdale.
Wilson, Elsie	Markdale.
Haldimand:	
Buckley, Lawrence	Cheapside.
Duxbury, Oral	Cheapside.
Forrester, Asa	Dunnville.
Foster, Dorothy	Dunnville.
Foster, Sylvia	Dunnville.
Rozell, Willie	Canboro.
Sherk, Clara	South Cayuga.
Halton:	
Kenney, Francis	Acton.
Sellers, Nancy	Milton West.
Hastings:	
Allore, Francis	Bogart.
Doughty, Mary	Eldorado.
Eager, Mary	Belleville.
Ingram, Nellie	Faraday.
Jones, Mabel	Belleville.
Johnston, Mary	Belleville.
Jaynes, Perry	Marysville.
McAdam, Wesley	Marlbank.
Narrie, John	Marmora.
Shaw, Vera	Hastings.
Ward, Albert	Stirling.
Waldron, Arthur	Trenton.
Whalen, Mary	Point Anne.
Huron:	
Balkwill, Clara	Exeter.
Colclough, Lorne	Clinton.
Cole, Jean	Clinton.
Cole, Melvin	Clinton.
Doubledee, Lena	Wroxeter.
Laporte, Dennis	Zurich.
Montgomery, Elsie	Wingham.
Marshall, John	Hensall.
Marshall, Russell	Hensall.
Steepe, Phoebe	Goderich.
Simmons, Luella	Gorrie.
Wiggins, Parkie	Dungannon.

List of Pupils in the Ontario School for the Deaf—Continued.

County, Etc.	P.O. Address.
Kent:	
Adkin, James	Bothwell.
Brewer, Blanche	Bothwell.
Christian, Gertrude	Wallaceburg.
Dubois, Madeline	Wallaceburg.
Goodison, Ada	Coatsworth.
Healey, Dorothy	Wheatley.
Julien, Joseph	Wheatley.
Meredith, Stella	Thamesville.
Toulouse, John	Chatham.
Lambton:	
Batty, Blanche	Sarnia.
Chenney, Roy	Petrolia.
Johnston, Olive	Sarnia.
Jackson, Leone	Oil Springs.
Jackson, Myrel	Oil Springs.
Leckie, Elsie	Sarnia.
Leckie, Alice	Sarnia.
Leckie, Alma	Sarnia.
McKenzie, Earl	Florence.
McKenzie, Flora	Florence.
McKenzie, Clarence	Florence.
Squire, Edith	Wyoming.
Stewardson, Law'nce.	Forest.
Watson, Vern	Watford.
Wark, Jean	Wyoming.
Lanark:	
Hughes, Ernest	Carleton Place.
Leggett, Gordon	Perth.
McLaren, Mary	Smith's Falls.
McLaren, Rachel	Smith's Falls.
Rathwell, Charles	Perth.
Wenzel, Doris	Lanark.
Lincoln:	
McMillan, Duncan	St. Catharines.
Thornton, Lloyd	Vineland Station.
Watson, Bert	St. Catharines.
Leeds:	
Bishop, Ethel	Gananoque.
Quinn Carman	Brockville.
Swayne, Robert	Athens.
Middlesex:	
Garrett, Gladys	Granton.
Humphrey, Hazel	London.
Hodgins, Mary	London.
Hodgins, Sadie	London.
Hodgins, Albert	London.
McMurray, Mirton	Belton.
Steele, Annie	London.
Suddy, Fred	London.
Muskoka District:	
Johnston, Ella	Utterson.
Northumberland:	
Ball, Glen	Baltimore.
Ball, Lisgar	Baltimore.
Shannon, Lenna	Brighton.

County, Etc.	P.O. Address.
Nipissing District:	
Audet, Alcide	Cobalt.
Brown, Annie	Galston.
Dorschner, Charles	Mattawa.
Legault, Clarida	Sturgeon Falls.
Rodhy, Theodore	North Bay.
Whalen, Loretta	Hill View.
Whalen, Mary	Hill View.
Slotnik, Louis	Englehart.
Norfolk:	
Davis, Florence	Simcoe.
Oxford:	
Abrey, Irene	Drumbo.
Groves, Russell	Ingersoll.
Illes, Hazel	Ingersoll.
Wagester, Walter	Tavistock.
Youngs, Cyrus	Embro.
Youngs, Stanley	Embro.
Ontario:	
Benns, Charles	Claremont.
Lappin, Leo	Atherley.
Lott, Reata	Oshawa.
Maynard, John	Uxbridge.
Wilton, Lesley	Claremont.
Prince Edward:	
Harris, Mary	Picton.
Perth:	
Eickemeyer, Norman	Monkton.
Kaufman, Margaret	Palmerston.
Miller, William	Tavistock.
McIntyre, Ross	Munro.
Parry Sound District:	
Bagby, Florence	Katrine Station.
Blais, Gladys	Burk's Falls.
Peel:	
Davey, John	Nortonville.
McVean, Archibald	Malton.
McLeish, Marjorie	Caledon.
Prescott and Russell:	
McDougall, Elsie	South Indian.
McDougall, Peter	South Indian.
Peterborough:	
Meyett, Joseph	Peterborough.
Meyett, Charles	Peterborough.
McBrien, Elwood	Peterborough.
McMillan, Nellie	Havelock.
McMillan, Ena	Havelock.
Yerrow, Bruce	Peterborough.
Renfrew:	
Dallaire, Ambrose	Perrault.
Dick, Alton	Renfrew.
Gervais, Virgine	Camel Chute.
Garvin, Jean	Arnprior.

List of Pupils in the Ontario School for the Deaf—Continued.

County, Etc.	P.O. Address.
Renfrew—Continued.	
Hunter, George	Matawatchan.
Hunter, Raymond	Matawatchan.
Hunter, Clifford	Matawatchan.
Schneider, Leonard	Pembroke.
Schneider, Albert	Pembroke.
Schneider, Milton	Pembroke.
Sleeth, Gordon	Douglas.
Teepel, Emma	Khartum.
Whyte, Belle	Arnprior.
Saskatchewan, Province of:	
Banks, Maurice	Hazenmore.
Simcoe:	
Bowen, Roy	Cookstown.
Godfrey, Mabel	Orillia.
Gallinger, Edith	Lisle.
Hall, Ewart	Midland.
Kelcey, Lillian	Barrie.
Rivet, Douglas	Midland.
St. Amant, Herman	Penetanguishene.
Sloan, Harry	Churchill.
Tudhope, Catherine	Orillia.
Wheat, Dorothy	Midland.
Wright, Elsie	Orillia.
Stormont:	
Campbell, Mary	Avonmore.
Ingle, Agnes	Cornwall.
Sudbury District:	
Bealer, Frank	Copper Cliff.
Chenier, Leonard	Hanmer.
Cheviette, David	Hanmer.
Legrandeur, Victor	St. Charles.
Martel, Joseph	Sudbury.
Walters, Josephine	Sudbury.
Walters, Jack	Sudbury.
Thunder Bay District:	
Munro, Ada	Slate River Valley
Smith, Walter	Fort William.
Thompson, Jean	Fort William.
Victoria:	
Brandon, James	Kinmount.
Coulter, Caliph	Kirkfield.
Patrick, Nellie	Lindsay.
Western, Florence	
Wellington:	
Barbour, Clifford	Hillsburg.
Carter, Elizabeth	Guelph.
Johnston, Viola	Drayton.
Marshall, Jessie	Arthur.
McQueen, Mary	Guelph.
Wentworth:	
Allen, Muriel	Hamilton.
Batstone, Jesse	Hamilton.
Bayliss, Hector	Hamilton.
Cooper, Martha	Dundas.
Casey, Margaret	Dundas.
Cronkhite, Vera	Hamilton.
Gorman, Walter	Hamilton.
Peel, Douglas	Bartonville.
Struble, Norman	Hamilton.
Tait, Harold	Hamilton.
Tait, William	Hamilton.
Webster, Elsie	Aldershot.
Welland:	
Caswell, Sylvia	Niagara Falls.
Farr, James	Marshville.
Waterloo:	
Brown, John	Kitchener.
Crosson, Jack	Galt.
Durrant, Evelyn	Breslau.
Golds, Charles	Kitchener.
Klinkman, Mary	New Hamburg.
Kube, Laura	Kitchener.
Maule, Rena	Galt.
Strong, Luella	Breslau.
York:	
Angelchick, Lena	Toronto.
Allen, Winnie	Toronto.
Buchan, John	Toronto.
Buchan, Lucy	Toronto.
Buchan, Caroline	Toronto.
Bournes, Greta	Toronto.
Bennett, Charles	Toronto.
Casey, Lillian	Toronto.
Dolby, Martha	Toronto.
Dickson, Violet	Toronto.
Davey, Charles	Toronto.
Davey, Norman	Toronto.
Egginton, Maud	Toronto.
Egginton, Gwendoline	Toronto.
Evans, Christopher	Toronto.
Goulding, Thomas	Toronto.
Goldman, Joseph	Toronto.
Hardy, Gladys	Toronto.
Leeder, Flora	Toronto.
Laforte, Augustine	Toronto.
Laughlin, Nellie	Toronto.
Marks, Jennie	Toronto.
Month, Harry	Toronto.
Maiola, Lorenzo	Toronto.
McCann, Grace	Toronto.
McGovern, William	Toronto.
Malinsky, Rosie	Toronto.
McCallum, Duncan	Strange.
Noakes, Oscar	Toronto.
Osborne, Iona	Toronto.

List of Pupils in the Ontario School for the Deaf—Continued.

County, Etc.	P.O. Address.
York—Continued.	
Powell, Marion	Toronto.
Pattillo, Lenore	Toronto.
Peirce, Frank	Toronto.
Patterson, Walter	Toronto.
Patterson, Lewis	Toronto.
Pack, Sydney	Toronto.
Patterson, William	Toronto.
Proctor, Leslie	Toronto.
Reading, Victor	Toronto.
Robinson, Charles	Toronto.
Roberts, Florence	Toronto.
Smith, Norma	Toronto.
Skarcovitz, Jack	Toronto.
Sole, Erna	Toronto.
Shidlowsky, Abie	Toronto.
Thomson, Anabel	Toronto.
Tate, James	Toronto.
Walker, Arthur	Toronto.
Willmott, Charles	Toronto.
Wraight, Lucy	Toronto.

Cost per Pupil, Ontario School for the Deaf

Year ending October 31st, 1916

Heading of Expenditure	1914-15			1915-16		
	Total expenditure year ending October 31st, 1915	Yearly cost per pupil October 31st, 1915	Weekly cost per pupil October 31st, 1915	Total expenditure year ending October 31st, 1916	Yearly cost per pupil October 31st, 1916	Weekly cost per pupil October 31st, 1916
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Medical department	202 94	0 74	0 01¼	188 87	0 72	0 01
Butcher's meat, etc	4,497 76	16 26	0 30	4,655 45	17 63	0 34
Flour, bread, etc	1,594 60	5 77	0 11	1,595 32	6 04	0 12
Butter and milk	4,756 98	17 24	0 33	4,696 54	17 79	0 34
General groceries	2,915 99	10 57	0 21	3,106 15	11 77	0 23
Fruit and vegetables	1,151 66	4 18	0 08	1,441 82	5 46	0 11
Bedding and clothing	738 32	2 67	0 05	493 69	1 87	0 04
Fuel	8,997 91	32 61	0 63	12,822 60	48 57	0 93
Light	981 90	3 56	0 07	786 82	2 98	0 06
Laundry, etc	742 57	2 69	0 05	917 20	3 47	0 07
Books and apparatus	1,045 82	3 79	0 07½	1,107 44	4 19	0 08
Printing, etc	607 74	2 20	0 04¾	536 43	2 03	0 03
Furniture, etc	1,050 08	3 80	0 07¼	221 40	0 84	0 02
Farm	899 64	3 25	0 06	883 32	3 35	0 06
Repairs, ordinary	874 78	3 18	0 06	710 04	2 69	0 05
Water	900 00	3 26	0 06	900 00	3 41	0 07
Sewage	129 17	0 48	0 01	200 00	0 76	0 01
Miscellaneous	1,031 79	3 74	0 07	1,165 16	4 41	0 08
Salaries and Wages	35,709 19	129 38	2 49	37,404 25	141 68	2 72
	68,828 84	249 37	4 79	73,832 50	279 66	5 37

Average number of pupils, 1914-15, 276.
Annual cost per pupil, 1914-15, $249.37.
Weekly cost per pupil, 1941-15 $4.79.

Average number of pupils, 1915-16, 264.
Annual cost per pupil, 1915-16, $279.66.
Weekly cost per pupil, 1915-16, $5.37.

Certified correct.

J. W. PEARCE,
Bursar.

APPENDIX X

ONTARIO SCHOOL FOR THE BLIND

ANNUAL REPORT OF THE PRINCIPAL

To the Honourable R. A. Pyne, M.D., LL.D.,

Minister of Education for Ontario.

Sir,—I have the honour to transmit herewith the Forty-fifth Annual Report of the Ontario School for the Blind, Brantford, for the year ended 31st October, 1916.

I have the honour to be,

Sir,

Your obedient servant,

C. W. James,
Principal.

In presenting the forty-fifth annual report of the Ontario School for the Blind, I have first to announce the resignation of the former Principal, Mr. H. F. Gardiner, and my own appointment to reorganize the school along new lines with the view of endeavouring to provide more avenues of vocational training and to enlarge and improve those already taught so as to enable the blind students to fit themselves to qualify as useful wage-earning citizens.

Mr. Gardiner retired from the Ontario School for the Blind on the 31st of August, 1916. His resignation was prompted by a strong desire to return to those literary pursuits for which he is so well qualified. A forceful, ready, and versatile writer and speaker, endowed with vigorous health and possessed of a vast fund of useful knowledge acquired by long years of study and journalistic work, it is easy to predict for him many years of happiness in following those pathways which have always been to him a source of great pleasure.

Mr. Gardiner's letter of resignation, the Minister's reply thereto, together with his letter of farewell to students appear as an appendix to this report.

The Work of the School

I have to report an increase of three (from 109 to 112) in the average attendance for the session; also an increase in the total registration from 117 to 124. The registration of pupils during the twelve months of the official year from November 1st, 1915, to October 31st, 1916, was 143, eleven more than in the preceding official year.

Changes in Staff

On assuming official control on the first of September, 1916, I deemed it in the best interests of the school to make such changes in the staff as would best increase its efficiency. Miss K. Hanlon having resigned her position on the literary staff to get married, made it possible to secure the services of Miss C. P. Kavanagh, a former successful teacher of the blind here who had been forced to resign owing to illness. Mr. J. M. Maloney, a literary teacher, has been succeeded by Mr. W. J. Hickey, a Public School teacher of wide experience, and Miss Hilda Young, a graduate of Westminister College and the Toronto Conservatory School of Expression and Physical Culture has been added to the staff. Mr. D. T. Green, formerly supervisor of boys, has been succeeded by Sergt. G. S. Temple, a returned soldier. Sergt. James Gourley, also a returned soldier, has been appointed to take charge of the Boys' Dormitory and to act as Assistant Supervisor.

Attendance

The total registration of pupils in the session 1915-16 was 124, seven more than in the preceding session: at the opening on Sept. 22nd, 1915, there were 110 pupils, as compared with 102 at the opening of the previous session: at the close 114 as compared with 109. Thirteen pupils who were not present at the opening in September arrived during the session: five of these were new and eight had been in attendance previously. Of the ten pupils who were present during a part of the session but did not remain till the end, two were feeble-minded, one was drowned, one became homesick and was taken home, two were in poor health, one was sent away for stealing, one remained at home to help her mother, one removed to the United States, and the absence of one was unexplained. Of the 114 pupils who were present at the close of the session, 67 were males and 47 were females.

The number of pupils in attendance at the opening on September 27th, 1916, was 109 as compared with 110 at the opening date in 1915 and 114 at the close of the school term on June 17th, 1916. Of those in attendance at the end of the last term, 89 had returned: one former pupil who was not here at the close of the term had come back, and nineteen new pupils had been enrolled.

New Pupils at Opening of Session, Sept. 27th, 1916

Name.	Residence.	Name.	Residence.
Anthony, Gordon	Brampton.	Sydar, Mike	Winnipeg, Man.
Conway, Ernest	Hough Lake.	White, Edward	Blind River.
Gash, James	Fernie, B.C.	Young, Kenneth	Binbrook.
Hartfield, Adolph	Lang, Sask.	Clark, Jessie	North Bay.
Hutchinson, Fernie	Fernie, B.C.	Gill, Grace	Toronto.
Konopski, Albin	Valley River, Man.	Hilton, Lydia	Belleville.
Kozlowski, Joseph	Winnipeg, Man.	Johnston, Gertrude	Winnipeg, Man.
McDonald, James	Clover Bar, Alta.	Knechtel, Annabelle	North Bay.
Macalister, Donald	Macalister, B.C.	Regimbal, May	St. Boniface, Man.
Metcalfe, William	Toronto.		

Pupils Admitted during October, 1916

Name.	Residence.	Name.	Residence.
Ormston, Ralph	St. Catharines.	Dawson, Christina	Toronto.
Wilkinson, Charles	Kingston.	Dalton, Mary	Hamilton.
Brunsden, Alma	Brantford.	Thompson, Theresa	Hamilton.
Beattie, Jeanie	Niagara Falls.		

Pupils Registered in Session 1915-16

Name	Residence
Ash, Rachel	Sarnia.
Berry, Jocelyn	Port Perry.
Bews, Anna	Bridgeburg.
Bezaire, Alma	Auld.
Bezaire, Lea	Auld.
Bickerton, Gladys	Navan.
Brennan, Alice	Bothwell.
Brock, Eva	Lynden.
Brunsden, Alma	Calgary, Alta.
Catling, Nellie	Goderich.
Clark, Lillian	Mount Dennis.
Crawford, Annie	Strathroy.
Creiger, Marion	Waterford.
Cuneo, Mary	Toronto.
Davison, Winifred	Meaford.
Dawson, Christina	Toronto.
Dickson, Julia	Toronto.
Fitzpatrick, Alta	Wheatley.
Fruiter, Pearl	London.
Gascoigne, Marjorie	Hamilton.
Grills, Iva	Cane.
Hardwick, Lillian	Toronto.
Hawley, Doris	Winnipeg, Man.
Henrich, Evelyn	Brantford.
Hewison, Betsy	Toronto.
Hyndman, Elsie	Norwich.
Ingram, Elizabeth	Pembroke.
James, Gertrude	Waterford.
Johnston, Charlotte	Guelph.
Kaufman, Blanche	Chatham.
Lammie, Greta	Hensall.
Lammie, Amy	Hensall.
Lansdowne, Norah	Toronto.
MacGillivray, Agnes	Listowel.
McAuley, Marjorie	Hamilton.
McCannan, Beatrice	Kenora.
McEwen, Geraldine	Radisson, Sask.
Miller, Susan	Gravenhurst.
Omizinahaquaiwi, Eliz.	Little Current.
O'Neill, Mary	Ottawa.
Philpott, Emily	Brockville.
Sells, Kathryn	London.
Shane, Ellen	Hamilton.
Simpson, Meryle	Dominion City, Man.
Slay, Gladys	Sarnia.
Smith, Effie	Brantford.
Squair, Ethel	Williamstown.
Stephenson, Muriel	Collingwood.
Thompson, Teresa	Hamilton.
Truscott, Ruth	Battleford, Sask.
Wagner, Rose	Toronto.
Webster, Helen	Wallaceburg.
Welsh, Verna	Baldur, Man.
Woodcock, Gladys	Toronto.
Wright, Elsie	St. Catharines.
Abram, Thomas	Toronto.
Barton, Gustavus	Kazabazua, P.Q.
Beach, Sparling	Ottawa.
Bell, Stewart	Bradley.
Bettridge, Edward	Brampton.
Campbell, Chas.	Toronto.
Chapman, Oswald	Rosseau.
Carscallen, Arch.	Tamworth.
Clissold, Fred	Mimico.
Cotter, Jas.	Ottawa.
Culver, John	Todmorden.
Cundy, John	Regina, Sask.
Derbyshire, Byron	Athens.
Des Brisay, Wilson	Nelson, B.C.
Dobbin, Robert	Toronto.
Duncan, Terence	Toronto.
Dyson, John	Toronto.
Fenton, Mills	Allenford.
Fonger, Stanley	Bruce, Alta.
Garlick, Walter	Ottawa.
Gomm, William	Toronto.
Grausdin, John	Lettonia, Man.
Green, Fred	Chesley.
Green, Harold	Elmwood, Man.
Grills, Ion	Campbellford.
Hackett, John	Toronto.
Higgins, Thomas	Toronto.
Hill, Norman	St. Thomas.
Hollett, Stanford	Toronto.
Johnston, Harold	Brockville.
Keller, Nikolay	Hyas, Sask.
Joyce, Judson	Hamilton.
Kennedy, Edward	Ottawa.
Lidstone, Fred	Walkerville.
Lott, Ernest	Brussels.
Lowe, Walter	Hamilton.
Macbeth, Stanley	Toronto.
Makey, Lawrence	Tilbury.
Manning, Roy	Owen Sound.
Marcotte, Cleophose	Mattawa.
McKee, William	Esteven, Sask.
McMillan, Robert	Stettler, Alta.
Morrison, Vernon	Winnipeg, Man.
Murray, Ancile	Goderich.
Oster, Clarence	St. Catharines.
Parfitt, Allan	Toronto.
Patterson, Clifford	Hamilton.
Paul, Leonard	Haileybury.
Philpott, John	Brockville.
Powell, James	Toronto.
Rankin, James	Bickford.
Richardson, Robert	Hamilton.
Riddell, Gordon	Toronto.
Rigg, William	Mount Dennis.
Robinson, Charles	Barrie.
Salter, Melville	Oshawa.
Sherman, Leonard	Fernie, B.C.
Simmons, Walter	Copper Cliff.
Smith, Joseph	London.
Steele, Fred	Perth.
Stoddart, Ernest	Copper Cliff.
Sutherland, Joseph	Sutherland, Sask
Tomlinson, Roy	Saskatoon, Sask.
Towner, John	Toronto.
Vance, Frank	Saskatoon.
Vincent, Cecil	Crookston.
Webb, Harold	Allandale.
Westcott, Frank	Salt Spring Island, B.C.
Wilkinson, Charles	Kingston.

Re-Organization Scheme

In following out the scheme of re-organization many new features have already been added, and although the time at our disposal has been all too short, yet much has been accomplished.

The Farm and Stables

In September last there were but two cows and we were purchasing our milk supply at 7c. per quart. We have now a herd of seven fine grade Holstein cows and it is expected to increase this number to twelve as soon as the necessary addition to the stables is provided. A new dairy building is to be erected this year which will enable us to handle our milk supply to advantage.

Poultry Raising

With the view of teaching this valuable industry to blind pupils, two up-to-the-minute poultry houses have been erected, each capable of housing 150 hens. Three Prairie State incubators, each fitted for 340 eggs, and one feeder capable of holding 240 eggs, also ten hovers or artificial mothers, have been provided. This outfit will be placed in commission as soon as the severe weather is over.

Gardens

In order to enlarge our garden space we are reclaiming about three acres of splendid land formerly overgrown with scrub willow. This will make a valuable addition to our house gardens and permit the introduction of vegetable growing into our curriculum.

Play Grounds and Gymnasium

Believing it to be absolutely necessary to provide for the physical as well as the mental well-being of the pupils, new openair playground equipment has been installed and in addition to the standard swings, teeters, running courses, etc., roller skates and auto kiddy cars have been provided. The Gymnasium has been re-fitted with new equipment and now contains a vaulting horse, parallel bars, climbing rope, horizontal bar, wall ladders, travelling rings, Indian clubs, dumb bells, mechanical chest machines, rowing machine, hand muscle developers, single sticks with masks and uniform, boxing gloves, punching bag, and a set of wrestling and tumbling mats, making one of the most complete gymnasiums in the Province. It is expected that a swimming tank will also be added during the year.

Commercial Department

In the Commercial Department we have introduced the teaching of telegraphy. Braille shorthand will also be added as soon as the class in telegraphy is sufficiently advanced to take it up. These new subjects, together with touch typewriting, will provide remunerative work for those pupils who are able to take the complete course. It has also been found that blind pupils, particularly females, can become quite adept at operating telephone switch-boards in private plants. It is expected that special instruction in this work will in time be given.

The Musical Department

In this department the Musical Director now gives his services for the entire teaching day instead of a half day as formerly. Provision is also being made in this year's estimates for a new electric three manual pipe organ. A fourth teacher

has been appointed in this department to take the rudimentary work and dictation. This will relieve the Musical Director and the other members of his staff, and permit them to give more attention to the advanced pupils. Dr. Albert Ham, of Toronto, the musical adviser and examiner, has prepared a new syllabus which will enable successful pupils to take the degree of licentiate in music.

Piano Tuning and Repairing

Formerly the instructor in tuning devoted but three hours per day to this important branch with the result that the pupils did not receive the instruction in this work that was expected and required. The resignation of the late instructor made it possible to engage the full services of Mr. J. D. Ansell, an expert tuner and repairer. We are now able to give our pupils a complete course of instruction in the tuning and repairing of pianos and organs. To meet the requirements of the increased number of pupils in this branch seven new tuning rooms have been prepared, as nearly sound proof as possible. This provides a completely equipped plant consisting of fifteen rooms in which to carry on this most important industrial training.

The Industrial Work Shop

When I took over the school I found a competent Trades Instructor in charge of this branch, but, beyond the teaching of basket and willow furniture making, this really good man was unable to give instruction in many other useful avenues for want of proper equipment. With the view of obviating this condition, plans were immediately prepared for the installation of machinery for broom-making, brush and duster making, cane-seating and shoe making. The cane-seating work is now going on and the rest will be in progress as soon as the legislature votes the necessary funds.

LITERARY EXAMINER'S REPORT

To the Honourable R. A. Pyne, M.D., LL.D.,

Minister of Education.

Sir,—I have the honour to present herewith my report upon the literary work of the Ontario School for the Blind for the year just closed. The examination was conducted on June 1st, 2nd, 5th and 6th.

Mr. Wickens' Classes

As in former years I found Mr. Wickens doing good work. The pupils of his class with three exceptions were well up in the work.

Bible History.—The course covered the book of Exodus and the class took a high average.

Spelling.—Results good, the work covered being Grade 6 of the authorized speller.

Geography.—The Geography related to the countries engaged in the present European war and it was a pleasure to see how familiar the pupils were with the war and the countries at war.

Physiology.—This class was familiar with the work prescribed, viz.: the nervous system.

Arithmetic.—Work covered, problems in fractions. There was more variation in this class than in any other. On ten problems the marks ranged from 30 to 100.

Typewriting.—The pupils did some good work which was quite accurate, but they did not develop the speed I expected them to attain.

Reading.—The pupils read with good articulation and expression passages from the authorized third reader.

Latin.—This class consisted of four girls who showed a familiarity with the grammar and who translated selections from Caesar readily. The advantage of small classes was in evidence here.

Mr. Maloney's Classes

Arithmetic.—This was a junior class whose work was limited to addition, subtraction and multiplication to twelve times. The class showed great variation, the marks for ten questions ranging from 20 to 100.

Geography.—The class had studied Canada quite fully and showed more uniformity and a higher average than in arithmetic.

Physiology.—The work covered consisted of the first half of the authorized text and the class showed considerable familiarity with the work.

Reading.—This class read selections from the first reader and the chief aim sought was work recognition. A few pupils were able to add a little expression to the reading.

Grammar.—The class had studied 38 pages of the authorized text and were generally conversant with the work prescribed.

Writing.—The work in this class consists in teaching the form of capitals, small letters and figures. The progress was very satisfactory. As the class is large and instruction individual the progress is necessarily slow.

Physical Culture.—A large class of girls was given a series of exercises involving breathing, shoulder balance, trunk bending, lunging, etc. This work should be of great value to the pupils.

Miss Hanlon's Classes

Bible History.—This class was well up in its work. The course covers the second year of Christ's public ministry, Third, Fourth and Fifth Epochs of Ecclesiastical History.

Spelling.—A small class of seven pupils who spell well from Grade 4 of the authorized speller.

Arithmetic.—The limit covered is percentage and its applications. On a test of fourteen problems the class averaged 81 per cent., which was very satisfactory.

Geography.—Considerable variation was shown in this class. The course covered consisted of quite a detailed study of the Province of Ontario.

Reading.—Selections were read from the Second Reader. As the class is comparatively small they had received considerable attention and read with good articulation and some expression.

Grammar.—The class had covered the second part of the authorized Grammar and the pupils were able to parse well.

Writing.—The writing was generally good, particularly as to form and spacing.

Natural History.—This class had acquired quite a fund of knowledge relating to various animals and to several common articles of commerce.

Constructive Work.—Quite a beginning had been made in this work particularly with raffia.

Miss Radcliffe's Classes

Bible History.—The marks in this class varied from 20 to 100 on a series of questions relating to the life of St. Paul, the work as a whole was very satisfactory.

Spelling.—This class studies Grade 8 of the authorized speller. The marks assigned averaged 83.

Arithmetic.—The work covered was multiplication and division and the tables of length, area, weight, measure, etc. On a test of ten questions the marks ranged from 28 to 100, the average being 66.

Geography.—Fair results were shown of a study of the United States, Mexico, Central and South America.

Physiology.—A class of eight pupils was well up in the limit of work which embraces the bones of the body, circulation, respiration and digestion.

Literature.—This class gave evidence of having studied with considerable care and detail, "As You Like It" and selections from Tennyson.

Composition.—I read a composition, previously written, by each pupil of the class. The subjects were varied as was the success with which they were treated. Some pupils showed considerable ability while others did not grasp the work as well.

Grammar.—The course dealt chiefly with the inflections of the parts of speech to which was added some analysis and parsing. The results were generally good although some pupils were reticent about answering.

Writing.—Pupils were learning the small letters and particular care was given to form.

British History.—Although there was considerable variation in this class the average was very fair, the work studies consisted of the growth and extent of the British Empire.

Canadian History.—This seemed more popular with the class and the average attainment was higher. Canadian History to the close of the war of 1812-15 had been studied.

Miss Middlemiss' Classes

Bible History.—This is the junior class of all. Considerable variation in the time of attendance exists and the progress made was in about the same ratio. The work prescribed consists of the Commandments, Beatitudes, Lord's Prayer and Psalms 23, 100 and 121.

Spelling.—The class studies Grade 1 and part of Grade 2 of the Ontario Speller. As noted above considerable variation exists but the results are satisfactory. There is considerable difference in the mental capability of the pupils.

Arithmetic.—This is the elementary class and the work consists of addition and subtraction only. Generally satisfactory progress had been made.

Singing.—Some hymns in connection with Bible study have been learned.

Reading.—The pupils of this class learn the point alphabet and some read selections from the Primer. There is little real reading.

Kindergarten.—Some really good work has been accomplished in this department.

Miss Haycock's Classes

Bible History.—This class was well up and showed considerable familiarity with the books of Genesis and Exodus.

Spelling.—The class had covered half of Grade 2 and all of Grade 3 of the Ontario Speller. The class spelled very well except two who seemed incapable of detecting the relation of the sound to the spelling.

Knitting and Crocheting.—This work seems very popular with the girls as the class was very large and a great variety of work was shown. This had been done in a variety of patterns and stitches.

Miscellaneous Classes

Physical Culture for Boys.—Mr. Green has charge of this work and I witnessed a demonstration of a series of Swedish exercises and bar work. This work is very important and should be of value to the boys.

Sewing and Darning.—This work is in charge of Miss Cooper who secures splendid work from her pupils. The work is so arranged that the greater part of it has a practical value. The articles made showed great variety and their manufacture embraced practically all forms of stitches.

Domestic Science.—This work is also in charge of Miss Cooper. An innovation was made this year in that a class of the older boys also received instruction. All are interested in the work but the accommodation is very limited.

Bead Work.—Miss Cronk has charge of this work and gives instruction to a large class. The value of this work is limited but is a means by which a little pin money is made.

Willow Work.—This work is in charge of Mr. Donkin who succeeds in securing splendid work from his pupils. The variety of articles made is great. This is an occupation at which the blind should be able to earn a living.

Note and Suggestion

Improvement has been made this year in the grading of the classes. Some are still rather large and have too great a disparity of age in pupils for most effective results.

Respectfully submitted,

E. E. C. KILMER, B.A.

Inspector, Brantford Public Schools.

Pass List Musical Examinations, 1916

Pipe Organ—Graduate: Clifford Patterson, honours. Grade 3: Byron Derbyshire, honours; Beatrice McCannan, pass; Geraldine McEwen, first-class honours. Grade 2: Roy Tomlinson, first-class honours.

Piano—Graduate: Clifford Patterson, Mary Cuneo, Harold Johnston, honours; Geraldine McEwen, first-class honours; Byron Derbyshire, pass. Grade 6: Susan Miller, Muriel Stephenson, Mary O'Neill, honours; Wilson Des Brisay, pass. Grade 5: Roy Tomlinson, first-class honours: Sparling Beach, Blanche Kaufman, Beatrice McCannan, Kathryn Sells, honours; Lillian Hardwick, Ethel Squair, Greta Lammie, pass. Grade 4: Gladys Bickerton, honours; Amy Lammie, Gladys Slay, Joseph Smith, Alta Fitzpatrick, Elsie Wright, pass. Grade 3: Gladys Slay, first-class honours; Alma Brunsden, Betsy Hewison, Walter Garlick, honours; Alice Brennan, Fred Steele, pass. Grade 2: Agnes MacGillivray, Marjorie McAuley, honours; Cecil Vincent, pass. Grade 1: Alma Bezaire, honours; Stanford Hollett, Edward Kennedy, pass.

Violin—Grade 5: Geraldine McEwen, honours; Susan Miller, Harold Johnston, pass. Grade 3: Greta Lammie, Kathryn Sells, honours; Blanche Kaufman, Mary O'Neill, Muriel Stephenson, Fred Steele, pass. Grade 1: Wilson Des Brisay, pass.

Voice Culture—Grade 4: Walter Lowe, Walter Simmons, honours. Grade 3: Blanche Kaufman, pass. Grade 2: Agnes MacGillivray, Gladys Bickerton, honours.

Teachers' Course—Graduate: Mary Cuneo, Geraldine McEwen, Ethel Squair, honours.

Harmony—(No certificates until Part II has been passed.)—Grade 5, Part 1: Doris Hawley, Muriel Stephenson, pass. Grade 4, Part 1: Roy Tomlinson, first-class honours; Winnifred Davison, Gladys Slay, Amy Lammie, Alta Fitzpatrick, Leonard Paul, honours; Lillian Hardwick, pass. Grade 3, Part 2: Gladys Bickerton, Greta Lammie, first-class honours; Kathryn Sells, Blanche Kaufman, honours.

Rudiments of Music—Grade 2: Alice Brennan, Amy Lammie, Greta Lammie, Kathryn Sells, first-class honours; Beatrice McCannan, Gladys Woodcock, honours; Elsie Wright, pass.

REPORT ON MUSICAL INSTRUCTION

To the Honourable R. A. Pyne, M.D., LL.D.,

Minister of Education.

Sir,—I have the honour of submitting my report as examiner at the Ontario School for the Blind, Brantford.

The examinations which were held on June 14th and 15th, included the subjects:—Piano-playing, singing and voice production, organ-playing, violin-playing and choral class work.

A written examination in theoretical subjects took place in the previous week.

There were forty-one candidates in piano-playing, six in singing, twelve in violin, seven in organ, twenty-five in the theory of music (rudiments, harmony and counterpoint) and three in the art of teaching piano-playing.

In Grade No. 1, three pupils entered, all of whom passed, one reaching the honours standard.

In Grade No. 2, two gained honours, and one passed.

In Grade No. 3, the result was: One with first-class honours, three with honours, and two with a pass.

In Grade No. 4, there were five passes, and one in the honour section.

In Grade No. 5, one first-class honours, four received honours, three passed, and one failed.

In Grade No. 6, three passed with honours, one passed and one failed.

In the Graduating Class one obtained first-class honours, three honours and one passed.

These results are on the whole, quite satisfactory.

The improvement from a technical standpoint is most marked, and is distinctly better than in any previous examination—a fact which reflects great credit on the efficient, painstaking teachers, Mr. W. Norman Andrews, Miss Harrington, and Miss Smythe.

I would suggest that the less-gifted students in the higher grades of piano-playing and violin-playing, should devote a second session to the same grade, instead of moving up into another—for which they are not sufficiently prepared. In the event of the adoption of such a course, the teacher would have an opportunity of selecting additional studies, and pieces of various kinds, as well as to advance the technical and mental training generally.

Organ-playing.—Seven students were examined in this department.

Grade No. 2. In this Grade one received first-class honours, one passed, and one failed.

Grade No. 3. One gained first-class honours, one second-class honours, and one passed.

In the Graduation Class one candidate passed with honours.

I would respectfully reiterate my remarks of last year respecting the organ equipment.

"In view of the fact that there is so much real musical talent amongst the blind, and that a well-equipped organist possesses a congenial and favourable means of livelihood, I would respectfully submit that greater and increased facilities for practice should be given to the organ student of this institution. To meet this pressing demand, an up-to-date three manual organ is necessary, and could be placed in another part of the building."

Solo-singing and Voice Production.—Of the six candidates who were tested, five passed, three with honours. In spite of slight errors in pronunciation, the general result was distinctly favourable, the voice production and enunciation being particularly good.

Violin-playing.—Some four years ago I suggested that the study of the violin and other stringed instruments should be added to the music course. The excellent progress made by the pupils under their sympathetic teacher, Mr. Ostler, has fully justified this addition to the curriculum.

Twelve pupils were presented for examination.

In Grade No. 1, one candidate passed.

In Grade No. 2, one failed.

In Grade No. 3, of seven pupils, two obtained honours, four passed, and one failed.

In Grade No. 5, one gained honours and two passed.

These results reflect high credit on both teacher and pupil alike. I had much pleasure in listening to a sextette of players—four girls and two boy students, who performed a selection in a most creditable manner. The young people displayed good tone and phrasing and the general conception of their performance was distinctly artistic.

Theory of Music.—This class is now solely under the guidance of the Musical Director, Mr. W. Norman Andrews.

In all, twenty-five were examined.

Rudiments.—Four gained first-class honours, two honours, one passed, and four failed.

Harmony.—Grade 3, part 2. Of four papers sent in, two were excellent, two gained first-class honours, and one passed.

Harmony and Counterpoint.—Grade 4, part 1. Eight papers were written, one obtained first-class honours, five honours, and one passed.

Harmony.—Grade 5, part 1. The work of the candidates who passed in this was not very strong.

The Art of Teaching.—On passing the necessary examinations in both Theory and Practice, three well equipped students qualified as teachers of the piano.

The Choral Class.—The Choral Class consists of upwards of fifty voices. The parts are well-balanced, and the quality of tone distinctly good. I was very favourably impressed with the performance of several unaccompanied part songs, which were sung with much enthusiasm, precision, expression, and almost perfect intonation.

The Musical Director, Mr. W. Norman Andrews, is deserving of considerable credit for his work in connection with this important class. I noted also a marked improvement in the hymn singing at morning prayers.

Piano-tuning.—This class numbers about twenty, and I understand that the good work of the former teacher, Mr. Usher, is being satisfactorily carried on by his successor. Having myself considerable acquaintance with the practical side of

piano and organ tuning, and realizing therefore the great asset which a thorough training and complete understanding of tuning would be to many of these young students, I venture to express the hope that every encouragement will be given to make this Department as efficient as possible. Particularly is this important in view of the fact that piano-tuning is a source of livelihood to many of the blind.

Now that the study of music has become such an important factor in the education of the students at the Ontario School for the Blind, I would recommend that a curriculum be at once compiled, embracing the requirements of each grade in piano, organ, violin, singing and theory (rudiments, harmony, counterpoint and musical history).

In conclusion, I would offer very hearty congratulations to the members of the musical staff of this splendid institution, who by their earnest and successful endeavours are maintaining a high standard of excellence.

I have the honour to be,

Sir,

Yours most obediently,

ALBERT HAM, MUS. DOC., F.R.C.O.,
Examiner.

PHYSICIAN'S REPORT

TO THE HONOURABLE R. A. PYNE, M.D., LL.D.,
Minister of Education.

SIR,—I have the honour to present my annual report for the year ending October 31st, 1916.

The officers and pupils have, on the whole, enjoyed their usual good health throughout the year. One of the senior employees was off work for a number of weeks suffering from rheumatism, but made a perfect recovery.

There was an outbreak of measles in the Spring, but it was controlled without disturbing the routine of the school.

The usual petty ailments were dealt with daily throughout the year, and no very serious cases developed.

The new dormitories add greatly to the comfort and general well being of the pupils. The improved conditions, however, owing to the added space, make it more and more desirable that my recommendations be remembered, that a trained nurse of the proper type be appointed to take care of the sick in properly equipped rooms in the main building.

The newly appointed Physical Directress is doing splendid work, and the pupils are already showing most gratifying results.

The pupils returned in September in increased numbers, and on the whole, in splendid physical condition.

I have the honour to be,

Sir,

Your obedient servant,

Brantford, November, 1916. J. A. MARQUIS.

OCULIST'S REPORT

To Honourable R. A. Pyne, M.D., LL.D.,

Minister of Education.

Sir,—I have the honour to report the results of the examination of the pupils' eyes for the year 1916.

The usual examination was made in May; and in November, under the direction of the new Principal, all the pupils were again examined.

In May there were nineteen new pupils, and in November twenty-three, all with sight so deficient as to leave no doubt about their being eligible for education in this school.

It seems to me a mistake on the part of parents and guardians that so many of these children, who have been blind since infancy, should be delayed to the ages of twelve to fourteen to enter the school for the technical education of the blind.

During this last inspection special attention was given to the effect of disfiguring conditions of the eyes on the pupils' personal appearance, and many recommendations made with a view of giving such pupils a more happy and acceptable presence before the public, and thus in some degree lessen their handicap when going out into the world.

Some of these suggestions have already been carried out, such as the removal of disfiguring blind eyes and the substitution of artificial eyes. And one need only see these changes to appreciate the difference between a most obvious physical defect and an apparently normal facies.

In a few cases recommendations were made for the improvement of sight, which though it might be small in amount would be of immense value to the possessor.

The following is a classification of the diseases causing blindness:—

—	Males	Females	Total	Percentage
Ophthalmia Neonatorum	12	17	29	21.2
Optic Atrophy	12	9	21	15.3
Cataract, Congenital and Lamellar	9	9	18	13.1
Injury of one eye followed by Sympathetic Ophthalmia in the other	9	4	13	9.5
Injury by powder explosions, including gunshot wounds	8	.....	8	5.8
Injury by other means	3	.....	3	2.2
Interstitial Keratitis	4	4	8	5.8
Aniridia and Congenital Colobma of Iris	4	1	5	3.6
Choroiditis	3	1	4	2.9
Retinitis Pigmentosa	3	1	4	2.9
Microphthalmus	3	1	4	2.9
Uveitis	2	2	4	2.9
Myopia with subsequent changes	1	2	3	2.2
Measles	2	1	3	2.2
Buphthalmus	1	.....	1	.7
Symblepharon	1	.....	1	.7
Tuberculosis Keratitis	1	.....	1	.7
Growth, eyes enucleated, probably Gioma	1	.....	1	.7
Smallpox	1	.....	1	.7
Cause undetermined by appearance or history	2	2	4	2.9
Total	83	54	137	

The condition of vision of these eyes may be divided into five classes.

—	Males	Females	Total
Perception of sight only in one eye	14	9	23
Without perception of sight in either eye	18	11	29
Perception to sight only in both eyes	10	5	15
Limited objective vision in one eye	19	13	32
Limited objective vision in both eyes	22	16	38

Thus it will be seen that twenty-three are absolutely in perpetual darkness, while forty-four others can barely distinguish light from darkness, but not enough to be of any practical assistance. The remaining seventy have varying degrees of sight, but none enough to enable them to get their education at a public school.

Referring to the table of diseases, attention should be directed particularly to those causing so-called preventable blindness.

Ophthalmia Neonatorum	29 pupils	or 21.2	per cent.
Injury to one eye with Sympathetic Ophthalmia in other	13 "	9.5	"
Injury by powder and dynamite and gunshot wound	8 "	5.8	"
Injury by other means	3 "	2.2	"
	53 "	38.7	"

All of which might have been prevented by proper precaution. And it is remarkable that of the total, twenty-four, blind from all kinds of injuries, thirteen come from outside the Province of Ontario, mainly from the Western Provinces. That is to say blindness from injuries constitute forty-three per cent. of all the pupils from outside the Province, while for Ontario it is only ten per cent.

A number of acute inflammatory conditions of the eyes and ears required attention during the year, but none were of a very serious nature, and all yielded promptly to appropriate treatment.

Respectfully submitted,
B. C. Bell.

Brantford, March 1st, 1917.

HALIFAX CONVENTION

The biennial convention of the American Association of Instructors of the Blind was held at the Halifax, Nova Scotia, School for the Blind, July 4-5-6, 1916, the attendance of delegates from the United States and Canada being unusually large. The Ontario School was represented by H. F. Gardiner, Principal. At the opening session on Tuesday morning, Sir Frederick Fraser, Superintendent of the Halifax School, introduced His Honour Lieutenant-Governor MacKeen and His Worship Mayor Martin, of Halifax, both of whom welcomed the delegates to the hospitalities of the City and Province, and wished them God-speed in their work. Sir Frederick said his dream of twenty years was realized by the holding of the Convention in Halifax. Mr. O. H. Burritt, Superintendent of the Overbrook, Pa., School for the Blind, and President of the Association, returned thanks for the heartiness of the welcome, adding: "We need to impress our students with this fact—they must apply themselves to do things better than those who see for wherever they fail in efficiency the world will say that their inefficiency is due not to the lack of application, but to the fact that they are blind."

In the course of his presidential address, Mr. Burritt said: "That the education of blind children is a highly complex problem we educators of the blind have long been well aware. But it is largely because I have come to feel that in our school we have a duty to our children unperformed that I have chosen as my subject 'The Education of the Blind—a highly complex problem.'"

I need not say to you, my brothers and sisters in the profession, that we have in our children the usual differences in mentality that are found among an equal number of children who see, but that those differences are both accentuated and their number is increased by the diseases that in so many of our children have caused their blindness. After a careful consideration of the ability of each individual pupil at several meetings of our teachers, each teacher of that pupil being present, our teachers have placed 68 of 174 pupils enrolled in our main school during the school year 1915-16 in the list of those possessed of the highest mentality. This means that according to the best judgment of the teachers in all departments, literary, manual, music and physical, four out of every ten pupils in our main school last year were pupils of good mentality. Judged by the same standards and by the same teachers, 45 others—approximately one fourth of the entire main school—were placed in a group which I designated as "Pupils of lesser mentality, probably capable of graduating." In this group there are some good but slow, plodding boys and girls who will probably require one or two years longer to meet our requirements for graduation than the first group, but who are nevertheless worth-while pupils.

The next largest group contains the names of 27 pupils, 15 per cent. of the whole number, who have varying degrees of ability, but whose training presents special problems for solution.

A fourth group, only slightly smaller than the last, contains the names of 24 pupils whose ability is indicated with sufficient accuracy thus: "Pupils of low mentality needing special instruction."

The fifth group contains the names of ten "pupils of such inferior ability that they should be discharged." Indeed seven of these have already been discharged after having been under instruction and observation for periods varying between one and two years: the remaining three have been granted an additional year each.

At our Kindergarten building we have three groups of children designated respectively as kindergarten, connecting-class and first grade, whose ages vary from six to eleven years. A normal child entering the kindergarten will complete the work at this building in three years. As all these children are young and have been so short a time under observation, and as the early training of many of them has been seriously neglected, it is more difficult to classify them on the basis of mentality. Nevertheless the sympathetic observations of the experienced staff are usually quite accurate. Of the 41 children enrolled during the past school year the teachers have placed almost exactly one-half in the first two groups, thereby indicating their belief that this number will probably be capable of completing the eleven years' work required for graduating. Eight, about one-fifth of the number, are placed in our group of "pupils of low mentality needing special instruction," while twelve, approximately three out of ten, are "possessed of such inferior ability that they should be discharged." Six of these have already been discharged and the remaining six will be within the next year.

Summarizing these observations on the mentality of the student body of the past year, which is probably fairly representative of conditions each year, about two-fifths of our pupils are mentally alert and capable, some of them above the

average of their age among seeing children; one-fifth are less capable, but most of them well worth the time and money expended upon them; one-sixth have low mentality and require special, almost individual instruction, and in most instances, for a limited time only; one-eighth form a unique group three-fourths of whom having some vision and nearly all the rest losing sight between six and sixteen years of age, require instruction adapted to their peculiar needs; and one-tenth have too little mentality to warrant their continuance in school beyond the period necessary for observation and determination of their mentality—a period which with us varies from one month to two or three years, sometimes longer.

I think there is little doubt that in our schools the backward and feeble-minded children are receiving an undue amount of the time and energy of the entire staff and that our brightest pupils suffer thereby; while at the same time we are not providing the kind of instruction that these mentally sluggish and backward pupils ought to have.

Two things can be done to remedy this defect. Many of these brighter pupils, nearly all of our first group containing approximately two-fifths of the school, can advance more rapidly by working more by themselves with an occasional suggestion from the teacher. Why not give our brighter boys and girls opportunities to learn to work in large measure independent of the teacher? Why not let them realize more of the joy of mastery unassisted?

In this group of our brightest pupils, too, are those who should secure educational advantages outside the walls of the institution. In a word let us seek somewhat earlier in their careers as students extramural opportunities for a selected group of more capable pupils, particularly those who have lost sight subsequent to five years of age. If we utilize to the full the opportunities along these lines our teachers will have more time and strength for those who constitute our other groups who have less ability and less initiative and have greater need of help and direction.

Our problem is further complicated by the varying ages at which our pupils lose their sight.

I have already anticipated my next point, which is that the possession by some of the pupils in our schools of even a modicum of vision introduces an additional difficulty into our problem already sufficiently complex.

An additional complication is introduced into our problem by the lapse of time that occurs in many cases between the loss of sight and getting into school. This causes an abnormal variation in the ages of pupils in the same school grade. The only remedy for this condition is putting forth continued effort to secure the enrolment of each pupil at the earliest possible moment after his loss of sight. Here associations, commissions, and wide-awake field officers can be of material assistance, as experience shows.

The presence in our schools, in spite of our vigilance to prevent it, of the exceedingly backward and even the feeble-minded blind presents an additional problem. In theory, none of us admit the feeble-minded; in practice, we all have them. I do not say we keep them for very long, but I have yet to visit one of our schools that had no representatives of this group. I have already considered this point with considerable fullness. It only remains for me to suggest, if possible, some solution of this difficult and perplexing problem. We have all thought much about these boys and girls. Because of their double handicap their cases make a special appeal to our sympathies. For the feeble-minded there is but one place—they need and deserve the custodial care provided at the institutions for the feeble-minded.

But as educators of the blind we are concerned rather with the determination of the question of feeble-mindedness than with the disposition of these cases when the fact of feeble-mindedness is definitely established; for I assume that sooner or later—usually later, I fear—we all discharge them from our schools. I have all but reached the conclusion that for our school the solution of the problem lies in the provision of a small, separate building which may be euphemistically spoken of as an observation cottage. Here I would provide accommodation for the training under expert direction of about one-twelfth of my school population.

I have already transcended the time limits of a presidential address. I have considered what seem to me some of the most fundamental reasons for the complexity of our problem. It only remains for me to summarize the points I have tried to make.

First: There are amongst our children the usual differences in mentality that are found among an equal number of children who see.

Second: These differences are accentuated by the diseases that in many cases have caused blindness.

Third: The problem is further complicated by the varying ages at which sight is lost.

Fourth: The possession by some of even a modicum of vision introduces an additional complication.

Fifth: Lapse of time between loss of sight and entrance into school causes abnormal variation in ages of pupils in the same grade.

Sixth: The presence of the exceedingly backward and the feeble-minded blind presents an additional problem.

At the afternoon session, Miss Minnie E. Hicks, of the Maryland School for the Blind, read an interesting paper on "General Qualifications for Teachers in Schools for the Blind: What Special Training is Necessary or Desirable?" In the discussion which followed H. F. Gardiner, of Brantford, said that in his opinion there was one qualification for teaching the blind, very useful and desirable, though perhaps not essential, namely, good eyesight. It enables the teacher to detect and correct faults of manner and of attitude, such as standing or sitting improperly, putting the knuckles in the eyes and the fingers in the mouth, turning the head sideways and keeping the mouth open when playing the piano, wagging the head in time with the motions of the feet in walking, etc. The teacher with sight could also observe dirty hands and faces, and soiled or torn clothing. In teaching staff notation he had a decided advantage over the teacher who had never actually seen the staff. He could more easily and surely detect inattention or misconduct. A pupil with partial sight was easily tempted to play tricks on a teacher totally blind. The successful teacher needed to know more about the subject taught than was contained in the text-book, and the teacher with sight could acquire that extra knowledge from a wider range of books than the blind teacher confined to point publications. Then the teacher with sight was of more use than the blind teacher in looking after the pupils out of class, at play, during reading hour, going to church, in case of fire or other emergency. Mr. Gardiner disclaimed any idea of dispossessing blind teachers of their positions in order to provide employment for teachers having sight. The object in maintaining schools for the blind was not to give employment to adults with or without sight, but to confer the greatest possible benefit upon blind children, and all minor considerations should be sacrificed for the major one. Just as a blind woman should marry a man with sight, and a blind man should marry a woman with sight, a blind teacher should have pupils with sight, and blind pupils should have teachers who can see.

Mr. Hussey, of the Halifax School, took the opposite view, contending that a blind teacher best understood the capabilities of blind pupils, and he could tell by the pupil's voice when any impropriety was committed.

Mr. Dow, of Minnesota, and Mr. Walker, of South Carolina, thought each teacher should be judged on his merits as a teacher, without regard to whether he could see or not.

The discussion was cut short by the ruling of the chairman, but in the course of the afternoon and evening more than twenty of the Superintendents and Trustees of Schools represented at the Convention, personally thanked Mr. Gardiner for introducing the subject, and expressed their agreement with his ideas.

Three interesting "Round Table" conversations followed Miss Hicks' paper. Mr. Allen, Superintendent of the Massachusetts School, introduced the topic, "The Feeble Minded Blind, What Shall We Do With Them?" Mr. Driggs, of the Utah School, discussed "How Much Can We Properly Use Pupils in Our Schools to Perform Work Usually Done by Paid Employees?" "The Moral Development of the Child" was discussed at the third Round Table.

In the evening Sir Frederick and Lady Fraser, and Mr. and Mrs. Burritt welcomed the delegates, ex-pupils and many citizens of Halifax at a reception, the band of the Sixty-Third Regiment and an orchestra supplying music.

At the forenoon session on Wednesday, the report of the Uniform Type Commission was presented. Referring to the system that had been recommended at the California convention last year, it was stated that "the Commission has found that the vast majority of schools, superintendents, teachers, printers and associations are disinclined to adopt the Standard Dot System, unless the entire English-speaking world were inclined to adopt it, which seems impossible of accomplishment." On the principle that "possession is nine points of the law," the Commission reported that "the mind should turn at once to British Braille as a possible Uniform Type. With the exception of the United States and portions of Canada, British or European Braille is, to all intents and purposes, the only system of reading and writing for the blind of the civilized world. When, however, we consider that it is *more expensive* to emboss books in this system than in either New York point or American Braille; that the American systems conform much more closely to the approved literary and letter press practices than is the case with the British system as currently embossed, and that a knowledge of either of the American systems, due to the comparatively small number and unambiguous nature of the characters employed *is more easily acquired* than is a knowledge of British Braille, we hesitate to make choice of British Braille as the Uniform Type, and earnestly wish that its strategic position were held by one of the American systems." A scheme for the modification and improvement of the so-called "British Braille" had been presented to a British Committee for consideration, and after full discussion the Halifax Convention adopted this recommendation:

"That the American Association of Instructors of the Blind in convention assembled adopt officially and urge upon the blind of America, and those interested in work for the blind to adopt individually and officially 'Revised Braille, Grades I and II, as now authorized in Great Britain, provided however, that the duly authorized English Committee on Uniform Type come to a full agreement with our American Commission on Uniform Type for the Blind concerning such modifications in 'Revised Braille' as have been proposed by the American Commission or as may be proposed by either the American Commission on Uniform Type or the English Committee on Uniform Type."

It will be seen that the abandonment of New York point and American Braille

in favour of European Braille, is conditional upon the consent of a British Committee to modify and improve the latter. Should that be arranged, it will be a question for the management of each school in America to decide whether uniformity is worth the price to be paid for it, namely, the sacrifice of books, writing and printing appliances in a system more easily learned and handier to use than "British Braille." The pupils now attending the schools, and the ex-pupils who know New York point or American Braille, need not be alarmed about the imminence of the change. If it comes at all, it will not come in a week or a year.

In the afternoon Mr. Liborio Delfrino, Field Officer of the Pennsylvania Institution for the Blind, read a paper on "The After-life of our Pupils; the Amount, Manner and Propriety of School Assistance after Graduation." The next paper was entitled.—

An Honourable Living

By Herbert F. Gardiner, Principal, Ontario School for the Blind, Brantford.

In a letter from the Chairman of the Executive Committee of the American Association of Instructors of the Blind, I was asked to prepare a paper on the topic, "What is the Best Industrial Training to Provide the Blind with an Honourable Living?" Later I read in the "Outlook" that my name was on the programme for a paper on "What Kinds of Industrial Training Have Been Found Serviceable in Providing the Blind with an Honourable Living?" For a short answer, will it suffice to give a list of occupations in which blind men and women with whom I am acquainted have been successful?

Within the last few weeks I have had as visitors two young men, former pupils of the Ontario School of the Blind, who are organists in churches, directors of choirs and teachers of piano. Both are able to tune pianos, and one of them earns something at that occupation. The latter left the School in 1908. He had to buy a second-hand piano on credit, and incur other debts to the total amount of $400.00. Last year he earned $1,300.00. He impressed me as confident, but not conceited. The other young man left the School in 1912. He did not mention the amount of his income, but he was well dressed, had money in his pocket and was satisfied with his position and prospects. He is specially interested in voice-training.

In the 1908 Annual Report of our School is a letter from an ex-pupil, from which I quote: "In 1897 I started my life work. I had not even a piano. Since then I have had two, have paid all expenses for eleven operations, have carried my studies on in Toronto, becoming eligible to teach in the Conservatory should I so desire, and got ahead far enough to spend two years in Germany at an expense of $2,000.00, receiving the best instruction available in the world. My income in Toronto before going to Germany averaged $42.00 per week for two years. I had between 55 and 60 pupils. I have entered into competition with the sighted, and have held my own. I do not think any institution can help the pupil who does not try to help himself. I have earned all that I have spent since I left school."

I hear splendid accounts from time to time of the success of a young lady who left the School in 1908, and has since taught private pupils in a large city.

Another young lady, who left the School in 1909, is teaching in a small town in Northern Ontario, and she keeps me informed by letter concerning her achievements. In 1911 she wrote: "Trying to follow your good example, I have kept very busy myself for the last year, teaching music. I must confess, however, that it was somewhat trying at first to secure pupils where a number of teachers had already

settled, but with a little patience and perseverance I finally succeeded. I began with five pupils. I have now a class of thirty-two pupils, who are nearly all taking two lessons a week, at fifty cents per lesson. Apart from that, I do a little playing at private dances among the people of the town, for which I never get paid less than five dollars an evening."

A young lady who lives in the country, left the School in 1902. In 1911 she wrote: "I left the School ill, without money, and my dearest ambition—to complete a thorough course in music—dashed to the ground. For two years I was physically unable to attempt work of any kind. I began with two pupils, and soon had a class of six. I hired a horse by the day, and secured more pupils at a little place eight miles from home, saving enough to make a payment on a horse of my own. Now I am paying my expenses, which are not small. Over twenty pupils sufficed to tax my strength during the past summer. God has been good to me. Throughout my struggle I have endeavoured to do my work thoroughly and honestly. My pupils are my friends and confide in me. I am now fitting some of my pupils for College examinations, and am looking forward with anxious expectation to their future."

There is ample material in the thirteen Annual Reports of the Ontario School for the Blind, covering the period from 1903 to 1915, during which time I have served as Principal, to extend this list, but the experience summarized above will illustrate what can be done by showing what has been accomplished by blind music teachers.

Piano Tuning

A few weeks ago I asked a blind friend in Toronto to send me such information as he happened to possess about the present earnings of ex-pupils of our School employed at piano-tuning in the factories and warerooms of the city in which he lives. He mentioned one firm employing four graduates of the O.S.B., at salaries of $24.00, $20.00, $15.00 and $8.00 per week. Another firm employs three of our boys and pays $18.00, $16.00 and $15.00 per week. A third firm employs four, paying $20.00, $16.00, $15.00 and $10.00 per week. A fourth firm employs two, paying $18.00 and $16.00 per week. My informant gave me the names of these tuners, and in some cases I was surprised as well as delighted that they were doing so well.

Some years ago, I asked an ex-pupil, who was visiting the School, to compile for me a statement of the positions held by ex-pupils who had been instructed in tuning. His remarks, which referred only to those who were then earning from fifteen to twenty-five dollars per week, were printed in my annual report for 1907. The first pupil, A. C., was employed by M. & R. in 1882. In 1883 S. L. and R. H. S., and in 1885 J. E. S. were employed by the same firm. Two of these men decided to leave the factory and seek patronage as custom tuners, at which both of them did well. Their places were filled by J. C. and A. M. Other pupils who obtained situations in Toronto factories were H. M. in 1889, G. S. in 1896, G. M. in 1898, W. M. in 1883, A. D. in 1889, J. A. M. in 1894, W. H. J. in 1899, W. W. in 1895, S. G. in 1899, H. G. in 1901, N. Y. in 1903, E. B. in 1904. One of these men, while holding a situation in one factory for twelve years before removing to another factory where the remuneration was greater kept up an outside tuning connection of about two hundred pianos, and also did some selling. Another, who occupies a well-paid position in a piano wareroom, having charge of the entire stock of pianos and organs, acts as tuning instructor for the Conservatory of Music. Piano factories in Guelph, Ottawa, Buffalo, Chicago and Detroit employ blind tuners who were instructed in the Ontario School. My informant named two graduates who did not

go into factories, but preferred to work up an outside tuning connection on their own account, and who have made sufficient money to retire from the trade. The fact, he said, is now well established that a man without his sight can tune a piano as well, and as quickly, as anyone, and also do any ordinary repairing. Selling pianos and organs has become quite popular with tuners. He added that nearly all those mentioned in this review have purchased homes of their own.

Selling Pianos

An outstanding instance of success in this occupation is the case of Mr. P. E. Layton, of Montreal, who wrote me in 1909: "I owe my success in life to the four years that I spent at the Royal Normal College." The report of a meeting in Toronto on September 3rd, 1909, addressed by Mr. Layton, says: "Twenty years ago Mr. Layton came to Canada as an expert piano-tuner, and since his arrival he has devoted himself entirely to the piano industry. Since then he has built up a business worth $150,000.00, and employs twenty people."

Selling Agricultural Implements

Condensed from 1903 O.S.B. Annual Report: "A blind man, R. S., left the Ontario School in 1886 and came back for a visit in 1903. He said that he worked at odd jobs for farmers, and then embarked in the sale of agricultural implements, representing a United States firm, until he had saved enough money to go into business for himself. At the age of thirty-four, he was worth eight or ten thousand dollars, had a warehouse of his own and a well established business connection with a wide circle of customers. He could lay his hand upon any article in his stock, and was careful to keep everything in its proper place. He made no claim to exceptional ability, and he was not regarded as a brilliant student when at school."

I could give the name of an ex-pupil who conducts a successful confectionery business, and of another who manages a grocery, specializing in tea and coffee; and I presume that the occupation of another who stands on the street, selling shoelaces and lead pencils, could not properly be described as "dishonourable."

Willow Baskets and Verandah Furniture

Mr. Donkin, the Instructor in the Willow Shop connected with the Ontario School, spent a portion of the 1911 summer vacation visiting at their homes ex-pupils, who work at basket-making, the object being to see how they were getting along, and to give them any instructions and assistance that might be required in connection with the use of the new models, selling the product, etc. The results of his visitation were recorded in the 1911 Annual Report.

W. H. D. had been in the basket business for twenty years, working in a shop built by himself in the rear of his sister's house. He reported that trade was good; in fact, he had been so busy that he could not take a holiday. In addition to his local trade, he sent baskets to the Western Provinces.

G. B. W. was in the grocery business, but returned to willow work. He built a shop for himself, and leased a stall on the market from which to sell his baskets. He also had an agency for brooms and whisks.

B. C. was very busy at willow work, chiefly making and repairing bottle baskets, at which work he claimed to be able to earn $2.50 per day.

J. B. devoted most of his time to willow work, making occasional selling trips through the country with a team. He made many lunch baskets for the lumber camps.

I. P. had built up a good business, growing his own willow. He said he could not make the baskets fast enough to fill his orders.

As a result of Mr. Donkin's observations, he was more than ever convinced that basket-making is the very best trade that has yet been taught to the blind, offering as it does to the blind man, who is willing to work, the opportunity to build up a business of his own.

From the O.S.B. Annual Report, 1908: "So far, Mr. Donkin has confined his instruction to the making of oval and square clothes baskets of various sizes; bushel baskets; open market baskets, and square delivery and butcher baskets. He believes it is best for the blind workmen to specialize their work, and to confine their energies to work that sells freely and affords a fair margin of profit. The time required for a blind man to make a small reticule, which he could sell for forty cents, would suffice to make three clothes baskets, worth three dollars or upwards.

"I found on my visit to the Milwaukee shops that Mr. Kuestermann used wooden bottoms exclusively for his baskets, and on applying to him he very kindly sent me an assortment of models, which were successfully imitated by a local carpenter. The wooden bottom adds slightly to the weight of the basket, but it enables the blind workman to increase his output fully 50 per cent., and assures symmetry in the shape of the basket."

In recent years, many articles of verandah furniture, including chairs and tables of various patterns; also fancy lamp stands and shades have been added to the output of the Brantford shop. For these articles there is a large and increasing demand.

Farm Work

Some of the ladies and gentlemen present, who were at the Convention at Boston in 1907 may recall an address by Mr. C. C. F. Campbell on "Work for the Blind Among the Seeing." My report states that I questioned Mr. Campbell with regard to his closing remark that "a farm was needed for the blind 'deadwood' because there was a dearth of farm labour." I asked him to tell the Convention what a blind man could do on a farm that would be worth board and modest wages—say ten dollars a month. I know of healthy, strong blind men, sons of farmers, working at the willow trade in a little shop over the carriage house, whose help at the ordinary farm work would be welcomed if they were told what they could do. If a blind man so defective that he could be fairly classed as 'deadwood' could affect the farm labour problem, how much more valuable would a healthy intelligent blind man be. Assuring Mr. Campbell that I spoke in the spirit of enquiry and not in the spirit of criticism, I declared that if he would give me in detail the information I asked for about farm work, I would not need what he had given about willow, brooms or piano keys, for the farmers in Ontario were quarreling at the railway stations for the privileges of hiring green immigrants from Europe, and if blind men could be substituted for these, the problem of employing the blind, which had long been a puzzle to anxious inquirers, would be solved. But what could the blind man do on the farm? Could he plow, sow, harrow, hoe corn, reap, bind, load grain, drive horses, feed and milk cows, feed pigs, sheep, chickens, make fences? That he could do one thing was not enough. The farmer expected his hired man to be busy and useful from daylight to dark. Could the blind man fill the bill?

Mr. Campbell did not find time to answer my questions at Boston, but three years afterwards I asked a young blind man, who had been writing to me about his work on his father's farm, to tell his fellow pupils what he could do on a farm. He said: "I will tell you what I have done, and I think any blind man can do what I

have done. I would get up in the morning between five and six, and go back to the pasture field and help to bring the horses up to the stable, water and feed them hay and oats. Then I would clean the horses off and harness them; then go and turn the milk through the separator: then have my breakfast. After breakfast I would feed the calves, hens and pigs, and take the cows back to pasture. On some days I carried water to the house, churned, or operated the washing machine. In the middle of the forenoon I would take a pail of fresh water and a lunch to the men who were working in the field. Then I would clean the stables and fix up some feed for the pigs. About eleven o'clock I fed all the stock for noon. Then I would go on horseback and call the men to dinner. In the afternoon I cut weeds and thistles in the fence corners, or was employed washing the buggies or cleaning the harness, or cutting and splitting wood. I also had the job of hostler; if the horse and buggy were to go away, I always hitched the horse to the buggy and unhitched it when it returned. At night the chores were all to do again, such as feed the hens, pigs and calves, pump water for the horses and cattle, milk the cows, turn the milk through the separator, and take the horses back to the pasture field. When haying time came, I helped to cock the hay and levelled the hay in the barn. I also assisted in running the hayfork. In the harvest I pitched back on the grain stacks. When the potatoes were picked I carried pails of potatoes and emptied them into bags, while others picked them up. When the corn was cut I helped to stack it; then I helped to pull and top the mangels and turnips. In the fall and winter I was kept busy doing the chores and keeping the house supplied with wood and water. Part of the winter I was husking corn, and sometimes I was in the bush cutting cordword. In the spring when we were marketing our grain, I cleaned it all by turning it through the fanning mill. At that season I always took much pleasure in riding horseback, so as to give the horses lots of exercise.

"As a sideline I bought several settings of hens' eggs with which I had good luck, for about 85 per cent. of them hatched out, and when they were ready to sell I realized a good profit on them. My small experience in the chicken business taught me that it would be a good line for any one to follow, as there is always a good market for the chickens and the eggs. In telling you what I have done on a farm I have tried to show you that, while a blind man cannot do everything on a farm, still he can do a great many things, and most of these things he can do as well as a person with sight."

Another ex-pupil, also totally blind, writing to me about his work as a tuner and repairer, had just listened to the reading of what I have quoted, and he said: "I want to back Orville on all he has said with regard to a blind man on a farm. I just want to say that I go through nearly the same as mentioned by my good friend. I can mention something more that I have done that my friend did not. I think so much of horses that I ventured to halter breaking colts. I have three to show for my work in that line, and I generally have the harness on them before they are very old. I honestly believe that a blind person, a girl or boy, has a greater chance to do a lot of work on the farm than those in the city, unless the latter have a good paying job. I make a number of hammocks each spring, which I get rid of quite easily, and get the price I put on them. You see that I am not near a large town or city, and it is very seldom that any factory-made hammocks are brought in, and that helps me a lot. As a side line, a year ago this spring I bought some cattle. As we have lots of pasture for young cattle, father told me that he would pasture them for me, and I had good luck, as in eight months I doubled the money. I have learned to take my part with the sighted people, and I think the sooner one gets at it the better he will get along in life. I certainly ap-

prove of the Sloyd room. The boys must not give up when they hit their fingers instead of the nail. I expect to be driving nails soon, as we have about five thousand shingles to lay, and as the other men are working on the land, I shall have most of that job myself. I have been at it before, so I know how it goes. I like it. As it is near milking time, I must stop. Excuse mistakes and slip dots."

House Work

This is the story one of my big girls told to her fellow pupils: "The work in the farm house differs very little from the work in the city house, except that there are more pans to be washed in the country on account of the milking and churning and the feeding of the poultry. Notwithstanding my blindness I can wash and dry dishes, arrange and put them away in the cupboard or pantry; I can keep the pantry neat, put clean papers on the shelves, and scrub the table, the shelves and the floor whenever this is needed. I can lay the cloth and set the table for any meal; when the meal is ended I can clear the table and put the victuals away. I can clean, prepare and cook any vegetables, preferring those which have to be peeled to cabbage, which has to be cut, and celery, which often requires light scraping to remove any little specks; but if there be no one else to do it, I can and would prepare either or both of these vegetables. I can scrub, and though I may often rub a little harder than is really necessary, or take longer to do them than sighted persons take, I can wash and put the clothes out to dry. I can iron any of the plain clothes, but feel rather backward in trying the starched clothes. I can bake bread; also cakes and biscuits, and even pies if some are needed, and there is no one else to do it. I can make tea or coffee, or cocoa, and pour them out. I can brush off the stove, and I can light the fire, and clean and light the lamps. I can make the beds and tidy and keep in neat order the bedrooms. I can dust and shake out the mats, beat the carpets in housecleaning time, and clean the windows in an emergency. I can peel and prepare fruit for canning or preserving, clean currants or berries, put the sugar on them when they are in the preserving kettle, and though I would rather that some one else should do it, I can fill cans when the preserve is ready. I can close the cans and put them away. In a word, I can do almost anything in the home that any other girl with her full sight can do. I admit it may take a blind person a little longer to do some things that a sighted person would take at the same work, but when the work is finished it will be found to be done just as well, and in many cases much better, by the blind girl than the sighted one. We are so anxious to do our work well that we do it with extra care. There are a few things around the house that a blind girl cannot do well, but these are very few."

Another young lady, who had removed to British Columbia with her parents, wrote: "I feel very grateful for the privilege of spending five years in the O.S.B. The little I learned in cooking has been of great use to me since I came west, and I think as many of the girls as can should take it up. We never know when we may be called on to cook a meal, and it is well to have a little experience. There is very little in the line of housework that I cannot do, and I also earn considerable pocket money with my fancy work. I think there are lots of things a blind girl can do if she tries to make herself independent."

Still another: "I think you will be interested to know how my time is spent. The work I do is chiefly house duties—washing, scrubbing, ironing, dish-washing, helping to churn, helping some in cooking. As for polishing stoves, it seems difficult; I never do any more than the top and damper, although perhaps patience is all that is needed. It was my delight to husk corn in autumn. Since I left school I always try threshing our beans and succeed so well that it seems satisfactory to

all. I have just a way of my own. I think you would laugh to see me. When my sister was ill, I managed to get the work done very well. I exhibited my bead-work at the township Fair, receiving first prize, the honour being due to the skilful teaching at the O.S.B."

"Ab uno disce omnes"

Such are some of the occupations in which blind men and women with whom I am acquainted have succeeded and are succeeding in earning an honourable living. I have intentionally curtailed the list, for the reason that representatives of other schools are expected to speak on this topic, and it is right that they should have a clear field to discuss trades and occupations concerning which they know more than I do. You will observe that I have not mentioned teaching the blind in schools or in shops as a suitable occupation for blind men and women. Will any of us here present live to witness, and to celebrate the obliteration of the fallacy that the blind are all cast in a single mould; that what one blind person can do all blind persons can do; that attendance at a school for the blind ought to guarantee to every pupil, weak or strong, wise or foolish, indolent or industrous, neat or slovenly, honest or dishonest, the ability to procure, unaided, a comfortable living? In spite of all that has been spoken and written by those who have made a study of blindness, the public misapprehension on this branch of the subject survives. The late Mr. Anagnos, of Massachusetts, said at the Convention in 1904: "Very few of the blind in Europe are self-supporting. Three-fourths of them are paupers, some earn a part of their living, and two-thirds are supplied by alms. Thirty per cent. of those who went through the Massachusetts school were incapable of earning a living."

Mr. McCune, of Iowa, said in 1890: "For those who have learned some trade in the schools, but who lack ability to manage, and for that numerous class who lack home and kin, industrial establishments should be provided. These working homes have been much criticised, but nothing better has yet been found. The proper way to care for this class of the blind is a problem that no one has been able to solve."

Mr. Bliss, of Wisconsin, said: "Deprived of all sentiment the institution is practically a monument of charity, established and maintained by the generous philanthropy of a Christian commonwealth. The inmates belong to the defective classes and are universally recognized as such."

Mr. Smead, of Ohio, said: "What shall our students do when they go out from the fostering care of our Institution? is a question that has been pressing ever since schools for the blind were established. The schools cannot make finished scholars of all. Schools for the seeing cannot do that. They can make accomplished musicians of comparatively few. The tuning department can make competent tuners of those only who are able to acquire the requisite skill of ear and hand. It is the aim of all schools for the blind, so far as possible, to fit their students to be self-supporting. In the first place, our students ought to be prepared to be reputable and useful members of society. A blind man who is filthy in his person and speech, ill-mannered and uncouth, dishonest and tricky, will fail of acquiring the confidence of decent people, and so far will be hampered in anything he undertakes to do. The world may pity him, but it will not tolerate him."

Schools Without Workshops

A word about the best kind of industrial training and the place or places in which it should be imparted. Twelve years ago I went to the Convention at St. Louis, bearing a paper with the inquiry, "What occupations will provide a liveli-

hood for the young men and young women who outgrow the School?" In my innocence I imagined that I needed only to state my question, listen attentively to the replies of the older and more experienced Superintendents, go back home and make practical application of their instructions. I told about the things taught in the Brantford school, said that for various reasons basket-making had become unpopular; that "pupils are so persistent in their applications for instruction in piano-tuning, that I fear some who are not qualified by nature to succeed in that trade, are wasting their time at it, to the neglect of things that might be of real use to them. They get through with the literary curriculum in a few years, and as the limitation of the number of pianos makes it impracticable for any one pupil to work at either piano practice or piano tuning more than three hours per day, there is too much loafing about the premises, to the deteriment of mind and body. A boy with his sight spends five years in learning a trade, and works in a shop nine or ten hours each day, six days a week. How many years should it require for a blind boy to learn the same or a similar trade, when he works at it only two or three hours per day, five days a week, and takes three months vacation in summer? The average boy at school or college is in a hurry to get through, so that outgo may cease and income begin. Possibly the boy in the Blind Institution reasons that he will not be able to make a much better living after he acquires his trade than he is getting in the school, with a minimum of exertion and free of cost to himself or his relatives; therefore why should he be in a hurry to graduate?" I quoted a list of industries recommended for the blind by the manager of the Royal Blind Asylum, Edinburgh, and suggested that, as some of the trades which are fairly remunerative in Britain might not be suitable for this continent, I would be glad to get the results of American experience regarding the several items.

In the discussion which followed the reading of my paper, Mr. Wait, of New York city, took very strong grounds against teaching trades in Blind Schools, affirming that the blind youth should be given the same kind of education as their seeing brothers and sisters, and then left to find their vocations. In the New York Institution, he said, manual training was given, but trades were not taught. The seeing boy is not expected to learn a trade while pursuing his literary course. Why should more be required of the blind than of those who can see?

The next year (1905) Mr. Anagnos, of Boston, devoted much space to this subject in his Annual Report, declaring that "the obstacles, which hinder almost all persons bereft of the visual sense from engaging advantageously in handicrafts or from seeking to obtain employment in factories, are insurmountable, and no expedients nor devices of any sort can remove or lessen them. Hence, in our efforts to uplift the blind and equip them adequately to fight the battle of life successfully, we must follow the path indicated by reason and common sense; in other words, all our efforts should be devoted to the development and cultivation of the brain. Instead of giving a prominent place to handicrafts and endeavouring to teach several of them at a great expense of money and time, we must strive first and above all to increase the intelligence of our pupils, to awaken their insight and to strengthen their judgment, upon which their fortune depends. We must give them perfect knowledge and mastery of their own inner selves and inculcate in them the spirit of self-reliance and independence for success in life. By this system of education we hope to produce men and women of a fine type, strong, hardy, self-reliant, brave, enterprising, discreet. We purpose to make them capable of reasoning and judging, of thinking and planning, of deciding and executing."

I quote my comment, made eleven years ago: "The ideas presented by Mr. Anagnos, based upon the experience of many years are entitled to the greatest

respect. There is room at the top: but in every school—for the blind and for the seeing—there are many pupils whom no amount of training can qualify to fill high positions in professional or commercial life. Unless these earn a living with their hands, they will not earn it at all."

As nearly as I can recall the impressions produced by the perusal of Mr. Anagnos' beautiful sentences, I thought he was dodging the issue and burying the disagreeable facts under a mountain of glittering generalities.

The next year (1906) there was considerable discussion on the separation of the scholastic from the industrial work for the blind and the separation of blind adults from blind children. Mr. Wait, of New York City, wrote that "the admission and instruction of adults and children in the same school can only be justified on the supposition that blindness, in some mysterious way, eliminates the difference that otherwise exists between adults and children, and brings them upon a common plane so that they mingle together, without detriment, in the close relationship which exists in a residential school. If adults are to be instructed, moral and social, no less than educational, considerations require that the work should be done in schools separate from those devoted to children. Closely related to the question last considered is that of industries or trades in connection with the school. The vocation of skilled trade belongs to the period of maturity, and it follows that if adults are admitted to the school with minors, a strong inducement is at once furnished for the establishment of a trade school and manufacturing department, while, on the other hand, the existence of such department opens the way for the admission of adults to be trained to work in it. The industrial feature tends to become dominant. The schools in Boston, Philadelphia and New York city have each had a long, trying and costly experience in the matter, and it was found that the prime and essential work of education was subordinated to the conditions created and the demands made by the industries. The morals of the school were greatly impaired. The younger pupils were unduly influenced by the adults, whose mental attitudes, dispositions and physical habits were often taken up by the younger pupils, making them in greater or less degree the echoes and shadows of the older ones. Instead of a sense of self-reliance, there was developed a feeling of meritorious and, therefore, deserving dependence, which it was felt to be somebody's duty to recognize and provide for. Finally it became necessary to abandon the industrial experiment in order to save the institutions for the strictly educational work for which they were established. Looking to any lasting good conferred upon the pupils through the training in trades, by making them self-reliant and desirous to be self-supporting, the experiment was practically void of results.

"From the foregoing the conclusion is clear that trades or industries cannot be properly combined with ordinary educational work in a school of this kind. If trades are to be taught and industries are to be carried on, they should be taken up after school studies have been completed, and in a place far removed from the school proper."

With the added experience of a decade, I am to-day in entire accord with the opinions expressed by Mr. Anagnos and Mr. Wait, in the extracts above quoted with regard to the immediate and permanent divorce of the industrial departments from the schools for the education of blind boys and girls. I have seen the evil effects of association and imitation, such as Mr. Wait so graphically describes them—little boys taught by the example of grown men to smoke and to swear, to defy rules of conduct and frame lying excuses for disobedience, returning sneers instead of gratitude for all that was done to promote their welfare, hating work, despising discipline and prematurely developing into candidates for admission to a

poorhouse. I have seen boys weaned away from their literary work before they were half educated, and other boys unable or unwilling to take much needed exercise in the gymnasium on account of the demands of the tuning shop or the willow shop upon their time. Talk about the development of independence—with the older occupants of the shop preaching in shop caucases the doctrine that every employer of labour should be regarded as a natural enemy—I have seen sons of wealthy parents sore and disgruntled because they were not provided with retiring outfits of tools and materials at Government expense—they felt and freely said that they "had a right to everything that was going," and they had no thought of shame at the receipt of charity which they did not require.

While I believe the State should provide instruction and employment for blind adults, including the returned soldiers who have been blinded in battle, making up the difference between shop expenses and receipts out of general taxation, as is done in Milwaukee, I am fully persuaded that the time for a blind boy to learn the trade upon which he will depend for his livelihood is after, and not during his term at school; and the place in which he learns his trade should be many miles distant from the school in which he learns to read, write and cipher.

The discussion on Mr. Gardiner's paper was led by Superintendent J. T. Hooper, of the Janesville, Wisconsin, School, who pointed out that the present tendency in schools for the seeing is to pay more attention to technical and vocational education, and what was good for the seeing could not be bad for the blind.

In the evening Captain Clarence McKinnon, former Principal of Pine Hill (Presbyterian) College, but now Chaplain in the 219th Overseas Battalion, delivered an address on "Education," discussing the effect of the present war on our educational ideals.

"It is the battle of the intellect that determines the destiny of the world," said Captain McKinnon. "The educational institutions of the land must strive to construct in each individual a type of man that while he is a free man he is educated with sociological instinct, making him a loyal member of the state. Give the boy and girl a broad perception, make him see beyond his village or town or country, make him grow up with sociological habit that makes him a member of society fulfilling that dream of the Divine Saviour, the brotherhood of men," was Captain McKinnon's solution to the problem of education as effected by the war.

At the Thursday morning session, Sir Frederick Fraser, of the Halifax School, read a paper on the Psychology of the Blind which dwelt upon the assistance rendered by touch in visualizing objects. Mr. Latimer, of the Maryland School, led the discussion, which became general, each speaker giving extracts from his experience in trying to make blind people understand what different things looked like. Mr. Gardiner told of the procession of interested pupils who had come to his office to handle an old Snider rifle with bayonet attached.

"What degree of defective vision renders a child eligible to attend a School for the Blind? How should we teach the Partially Sighted?" was the title of a particularly interesting paper read by Mr. E. M. VanCleve, of the New York City School, the discussion on which was opened by Mr. Ray, of North Carolina. Showing how children with imperfect sight are taught in the Public Schools of Cleveland, Ohio, Mr. Irwin exhibited books printed in 36 point type.

In the afternoon there was an excursion on Halifax Harbour, and as some of the delegates had to leave early Friday morning, it was decided to finish the programme on Thursday night. Three Round Tables were largely attended. Superintendent Dow, of Minnesota, leading the discussion on "What Can we do to Cure

Blindisms?" He suggested that the reason blind children indulged in peculiar motions was because they could not see how other children acted. Mr. Latimer thought the motions were caused by the desire for exercise and the fear to move in any direction beyond a limited space. Mr. Gardiner told of cases in which he had found it impossible to eradicate the habits acquired in early childhood, usually, he believed, because the mothers, doing their own housework and having other children to care for, had not time to give special attention to the blind child.

Mrs. George D. Eaton, of the Iowa College for the Blind, contributed a paper on "Reading to Our Pupils: the kind, amount and time advisable," and Miss Merwin, of the Kentucky School, introduced the topic, "Diversions for Our Pupils."

Adjourning to the main hall, the delegates heard a paper by Mr. Argo, of the Colorado School, on "How Best to Teach the Institution Child the Value of a Dollar." Mr. Argo used his chicken farm as an illustration of his theory, that the dollar is appreciated when it is earned by personal labour. Mr. Oliphant, of Georgia, led the discussion.

After passing the customary resolutions, Mr. G. S. McAloney, of the Western Pennsylvania School, was elected President of the Association, and it was decided to hold the next Convention at Colorado Springs.

Letter of Resignation

27th July, 1916.

SIR:

After thirteen years' service, I have the honour to submit my resignation as Principal of the Ontario School for the Blind, to take effect—if you can conveniently select and appoint my successor by that date—at the end of August.

With forty-seven years of constant application to literary and educational work to my credit, I feel entitled to more leisure and less worry, during the portion of life that may be left to me, than I could hope to enjoy in this occupation; and I prefer to retire while health and strength enable me to say that I have never neglected any duty, nor avoided any labour, that could promote the welfare of the juvenile or adult blind—that I have always been on hand, and always on time.

Work for the blind has been to me a labour of love. I am pleased with and proud of the improvements that have been made to the buildings and appliances of the School during my term of office—with special satisfaction I refer to the point-print text-books and music which are to a large extent the result of the work of my own head and hands. In severing my official relations with the School, I shall not cease to be interested in its prosperity, and I shall always be delighted to hear of the success of its pupils.

I am pleased to testify to the uniform courtesy shown me by yourself and the members of your official staff in our frequent consultations on matters relating to the management and improvement of the School; and I have to thank you for the kind interest you have always taken in the blind, and for the liberal support you have given from year to year to measures which I have recommended for the amelioration of their condition.

I have the honour to be,
Sir,
Your obedient servant,
H. F. GARDINER,
Principal, O.S.B.

HON. R. A. PYNE,
Minister of Education, Toronto.

Reply

ONTARIO DEPARTMENT OF EDUCATION,
Toronto, August 2nd, 1916.

DEAR PRINCIPAL GARDINER:

I received your letter of the 27th ult., intimating your wish to resign, and have laid it before my colleagues of the Cabinet. In accepting it, I desire to acknowledge your friendly sentiments as to our official relations during the past ten years and to assure you that they are reciprocated. For the reasons given by you your decision to retire seems a perfectly natural one, and I trust you have years of health and congenial work before you. The officials of the Department, as well as myself, unite in cordial wishes for your welfare. The arrangements for the coming school term can all be made without difficulty, so that your desire to be released at the end of August can be met.

I am,
Yours sincerely,
R. A. PYNE,
Minister of Education.

PRINCIPAL GARDINER,
Institute for the Blind,
Brantford, Ont.

31st July, 1916.

To the Pupils and ex-Pupils of the Ontario School for the Blind, and their Parents.

DEAR FRIENDS:

Having completed thirteen years' service as Principal of the Ontario School for the Blind, I have decided to tender my resignation to the Minister of Education, to take effect during this summer vacation, thus leaving time for my successor to get ready for duty at the beginning of the next session in September. In consideration of our friendly relations throughout the past years, I have thought it well to prevent any possible misapprehension by assuring you that my retirement is entirely voluntary, and has not been suggested by anyone outside of my own family. I had contemplated giving up the position two years ago, feeling that after forty-five years of strenuous labour in newspaper and educational work I had fairly earned the right to a period of comparative ease; but the wish to complete some literary and musical undertakings in the point printing office, and the financial uncertainty following the outbreak of the war, delayed the fulfilment of my intention. I have been blessed with better health and greater capacity for work than most men of my age are privileged to enjoy, and by constant study and close observation I have managed to obtain information, and to introduce improvements, which have been helpful to the blind in and out of the School; but I entertain no delusions about the difficulty of filling a vacant place, hence I go out with full confidence that the School will continue to improve in the future as it has done in the past.

To the pupils who have worked faithfully for their own benefit and to the parents who have encouraged me by repeated expressions of appreciation and grati-

tude, my acknowledgments are due and are herewith presented. I also testify with pleasure to the uniform courtesy of the Minister of Education and his official staff in our frequent consultations. Whether my remaining days be few or many, I shall always be glad to hear of the prosperity of the School and of the success and happiness of those to whose welfare practically all my time and thought for years have been devoted. There have been some disappointments and annoyances during my term of office, but much good and useful work has been accomplished, and I have hope and faith that the lessons in industry and punctuality, in honesty and veracity, in perseverance and optimism, which I have tried to teach by daily example as well as by occasional exhortation, will have an influence on many lives long after I shall have passed away.

Good-bye, dear children and friends. God bless you all.

H. F. GARDINER.

Ontario School for the Blind

STATISTICS FOR THE YEAR ENDING 31st OCTOBER, 1916

I.—Attendance

	Male	Female	Total
Attendance for portion of year ending 30th September, 1872	20	14	34
" for year ending 30th September, 1873	44	24	68
" " " 1874	66	46	112
" " " 1875	89	50	139
" " " 1876	84	64	148
" " " 1877	76	72	148
" " " 1878	91	84	175
" " " 1879	100	100	200
" " " 1880	105	93	198
" " " 1881	103	98	201
" " " 1882	94	73	167
" " " 1883	88	72	160
" " " 1884	71	69	140
" " " 1885	86	74	160
" " " 1886	93	71	164
" " " 1887	93	62	155
" " " 1888	94	62	156
" " " 1889	99	68	167
" " " 1890	95	69	164
" " " 1891	91	67	158
" " " 1892	85	70	155
" " " 1893	90	64	154
" " 1894	84	66	150
" " " 1895	82	68	150
" " " 1896	72	69	141
" " " 1897	76	73	149
" " " 1898	74	73	147
" " " 1899	77	71	148
" " " 1900	77	67	144
" " " 1901	72	66	138
" " " 1902	68	70	138
" " " 1903	67	64	131
" " " 1904	68	66	134
" " " 1905	67	74	141
" " " 1906	71	76	147
" " " 1907	72	72	144
" " " 1908	71	68	139
" " " 1909	72	70	142
" " 31st October, 1910	77	67	144
" " " 1911	76	61	137
" " " 1912	69	55	124
" " " 1913	62	62	124
" " " 1914	65	50	124
" " " 1915	70	62	132
" " " 1916	82	61	143

II.—Age of Pupils

	No.		No.
Five years	0	Seventeen years	8
Six "	0	Eighteen "	8
Seven "	2	Nineteen "	4
Eight "	10	Twenty "	7
Nine "	9	Twenty-one "	5
Ten "	6	Twenty-two "	7
Eleven "	6	Twenty-three "	2
Twelve "	10	Twenty-four "	3
Thirteen "	14	Twenty-five "	2
Fourteen "	8	Over twenty-five years	8
Fifteen "	11		
Sixteen "	13	Total	143

III.—Nationality of Parents

—	No.	—	No.
Austrian	1	Newfoundlander	1
American	2	Swedish	.....
Canadian	65	Russian	2
English	48	Scotch	10
Irish	7	Unknown	1
Italian	1	Welsh	3
Galician	.....	Polish	.....
German	2		
Hungarian	.....	Total	143

IV.—Denomination of Parents

—	No.	—	No.
Congregational	1	Salvationist	.....
Christian Science	3	Lutheran	2
Baptist	5	Jewish	1
Disciples	1	Greek Catholic	1
Episcopalian	42	Unknown	1
Methodist	41	United Brethren	.....
Presbyterian	28		
Roman Catholic	17	Total	143

V.—Occupation of Parents

—	No.	—	No.
Accountants	2	Jeweller	1
Agents	3	Labourers	30
Baker	1	Liveryman	1
Bar-tender	1	Manufacturers	2
Barbers	2	Machinist	1
Blacksmith	1	Miller	1
Bill Poster	.....	Merchants	6
Book-keeper	1	Moulders	1
Bricklayer	1	Miners	2
Butcher	1	Painters	2
Cabinetmakers	2	Pedlar	1
Carpenters	10	Plasterer	1
Clergyman	1	Policemen	2
Caretakers	2	Police Magistrate	1
Clerk	1	Plumber	1
Confectioner	1	Railway employees	5
Drayman	1	Publisher	1
Dairyman	1	Sheet metal worker	1
Drover	.....	Shoemakers	2
Electrician	.....	Soldiers	4
Engineers	2	Stove mounter	1
Farmers	23	Stone mason	1
Fireman	1	Teamster	1
Fishermen	2	Tinsmith	1
Foreman	1	Tuners	2
Gardeners	3	Unknown	3
Government officer	.....	Wheelwright	1
Glass Blower	1		
Fruiterer	1	Total	143
Hackman	1		

VI.—Cities and Counties from which pupils were received during the official year ending 31st October, 1916

County or City	Male	Female	Total	County or City	Male	Female	Total
County of Addington	1	....	1	County of Northumberland	1	....	1
District of Algoma	3	2	5	" Ontario	1	2	3
City of Belleville	....	....	....	City of Ottawa	4	2	6
County of Brant	....	1	1	County of Oxford	....	....	....
City of Brantford	....	2	2	" Perth	....	2	2
County of Bruce	3	3	6	City of Peterborough	....	....	....
" Carleton	....	1	1	County of Prince Edward	....	....	....
" Dufferin	....	....	....	" Prescott	....	....	....
" Durham	....	....	....	" Russell	....	1	1
" Elgin	....	....	....	City of St. Catharines	2	1	3
" Essex	1	2	3	" St. Thomas	1	....	1
" Glengarry	....	1	1	" Stratford	....	....	....
" Grey	1	1	2	County of Simcoe	2	1	3
City of Guelph	....	1	1	" Stormont	....	....	....
County of Haldimand	....	....	....	City of Toronto	17	8	25
" Haliburton	....	....	....	County of Victoria	....	....	....
" Halton	....	....	....	" Waterloo	....	....	....
City of Hamilton	5	5	10	" Welland	....	1	1
County of Hastings	1	1	2	" Wellington	....	....	....
" Huron	2	3	5	" Wentworth	....	1	1
" Kent	1	3	4	" York	2	1	3
" Lambton	1	2	3	District of Parry Sound	1	....	1
" Leeds	3	1	4	Saskatchewan	6	2	8
" Lanark	1	....	1	Alberta	3	....	3
City of London	1	1	2	Manitoba	5	6	11
County of Middlesex	....	1	1	British Columbia	6	....	6
District of Muskoka	....	1	1	Quebec	1	....	1
District of Nipissing	3	2	5	County of Norfolk	....	1	1
City of Kingston	1	....	1	City of Niagara Falls	....	1	1
County of Peel	2	....	2	Total	82	61	143

VII.—Cities and Counties from which pupils were received from the opening of the School till 31st October, 1916

County or City	Male	Female	Total	County or City	Male	Female	Total
County of Addington	1	....	1	County of Haliburton	1	....	1
District of Algoma	10	5	15	" Halton	7	3	10
City of Belleville	4	1	5	City of Hamilton	23	23	46
County of Brant	9	8	17	County of Hastings	6	6	12
City of Brantford	17	13	30	" Huron	14	13	27
County of Bruce	10	12	22	City of Kingston	8	4	12
" Carleton	2	2	4	County of Kent	11	8	19
" Dufferin	2	1	3	" Lambton	20	8	28
" Dundas	3	3	6	" Leeds	15	5	20
" Durham	4	4	8	" Lanark	4	4	8
" Elgin	7	6	13	" Lennox	4	1	5
" Essex	15	22	37	" Lincoln	3	3	6
" Frontenac	5	3	8	City of London	12	11	23
" Glengarry	8	1	9	County of Middlesex	10	13	23
" Grenville	2	2	4	District of Muskoka	3	3	6
" Grey	11	12	23	County of Norfolk	11	10	21
City of Guelph	4	4	8	City of Niagara Falls	....	1	1
County of Haldimand	4	5	9	District of Nipissing	9	6	15

VII.—Cities and Counties from which pupils were received from the opening of the School till 31st October, 1916—Concluded

County or City	Male	Female	Total	County or City	Male	Female	Total
County of Northumberland	6	9	15	City of Toronto	80	54	134
" Ontario	8	13	21	County of Victoria	8	2	10
City of Ottawa	24	7	31	" Waterloo	12	6	18
County of Oxford	8	13	21	" Welland	9	6	15
" Peel	4	1	5	" Wellington	10	8	18
" Perth	5	11	16	" Wentworth	10	11	21
" Peterborough	13	5	18	" York	21	17	38
" Prince Edward	7	2	9	District of Parry Sound	3	....	3
" Prescott	4	....	4	Province of Quebec	5	1	6
" Renfrew	8	6	14	Saskatchewan	7	6	13
" Russell	5	3	8	British Columbia	9	....	9
City of St. Catharines	3	2	5	Manitoba	10	8	18
" St. Thomas	4	2	6	Alberta	5	3	8
" Stratford	3	1	4	United States	1	....	1
County of Simcoe	13	11	24				
" Stormont	5	1	6		589	435	1,024

VIII.—Cities and Counties from which pupils were received who were in residence on 31st October, 1916

County or City	Male	Female	Total	County or City	Male	Female	Total
County of Addington	1	....	1	County of Ontario	1	2	3
District of Algoma	3	1	4	City of Ottawa	4	3	7
City of Belleville	....	....	....	County of Oxford	....	....	....
County of Brant	....	1	1	" Perth	....	2	2
City of Brantford	....	1	1	City of Peterborough	....	....	....
County of Bruce	3	....	3	County of Prince Edward	....	....	....
" Carleton	....	....	....	" Prescott	....	....	....
" Durham	....	....	....	" Russell	....	1	1
" Elgin	....	....	....	City of St. Catharines	2	1	3
" Essex	....	2	2	" St. Thomas	1	....	1
" Glengarry	....	1	1	" Stratford	....	....	....
" Grey	1	1	2	County of Simcoe	2	1	3
City of Guelph	....	....	....	" Stormont	....	....	....
County of Haliburton	....	....	....	City of Toronto	15	4	19
City of Hamilton	4	2	6	County of Victoria	....	....	....
County of Hastings	1	1	2	" Waterloo	....	....	....
" Huron	2	3	5	" Welland	....	1	1
" Kent	....	3	3	" Wellington	....	....	....
" Lambton	....	2	2	" Wentworth	....	1	1
" Leeds	1	1	2	" York	2	1	3
" Lanark	1	....	1	District of Parry Sound	....	1	1
City of London	1	....	1	Quebec	....	1	1
County of Middlesex	....	....	....	Manitoba	5	6	11
District of Muskoka	....	1	1	Saskatchewan	4	1	5
" Nipissing	3	1	4	Alberta	2	....	2
City of Niagara Falls	....	....	....	British Columbia	....	4	4
County of Norfolk	....	....	....	City of Kingston	1	....	1
" Northumberland	1	....	1	" Niagara Falls	....	1	1
County of Peel	2	....	2				
				Totals	69	46	115

Ontario School for the Blind

MAINTENANCE EXPENDITURE FOR THE YEAR ENDING OCTOBER 31st, 1916, COMPARED WITH THE PREVIOUS YEAR

Item No.	Service	31st October, 1915			31st October, 1916		
		Total expenditure, 1915	Per Capita Average 109 pupils per year	Per Capita Average per week	Total expenditure, 1916	Per Capita Average 112 pupils per year	Per Capita Average per week
		$ c.	$ c.	c.M.	$ c.	$ c.	c.M.
1	Medicine, etc	207 76	1 91	3.5	260 89	2 33	4.5
2	Meat, Fish and Fowl	2,673 19	24 52	45.4	2,930 34	26 16	50.3
3	Flour, Bread and Biscuits	636 22	5 84	10.8	650 10	5 81	11.2
4	Butter and Lard	1,679 87	15 41	28.5	1,830 23	16 34	31.5
5	General Groceries	1,965 21	18 03	33.4	2,263 07	20 21	38.9
6	Fruit and Vegetables	263 59	2 42	4.5	717 06	6 40	12.3
7	Bedding, Clothing, etc	361 28	3 31	6.2	434 28	3 88	7.5
8	Fuel—Wood, Coal and Gas	4,750 28	43 58	80.7	5,326 77	47 56	91.5
9	Light—Gas and Electric	754 53	6 92	12.8	741 24	6 62	12.7
10	Laundry—Soap, etc	425 44	3 90	7.2	437 59	3 91	7.5
11	Furniture and Furnishings	650 19	5 97	11.1	796 29	7 11	13.8
12	Farm and Garden	720 91	6 61	12.2	796 24	7 11	13.8
13	Repairs and Alterations	1,168 90	10 72	19.9	1,144 98	10 22	19.7
14	Advertising and Printing	554 39	5 09	9.4	739 67	6 60	12.5
15	Books and Apparatus	1,353 15	12 41	23.0	1,171 17	10 46	21.1
16	Miscellaneous	1,496 44	13 73	25.4	1,649 87	14 73	28.3
17	Pupils' Sittings in Church	200 00	1 83	3.4	200 00	1 79	3.4
18	Rent of Hydrants	160 00	1 47	2.7	160 00	1 43	2.7
19	Water Supply	417 02	3 83	7.0	542 98	4 85	9.3
20	Salaries and Wages	24,870 43	228 17	422.5	25,352 47	226 36	435.3
21	Special—						
	Repairs to Pianos and Organs	144 58	1 33	2.5	129 21	1 15	2.2
	Hardware, Paint, etc	340 52	3 12	5.8	404 70	3 61	6.9
	Workshop—Willow Department	411 93	3 78	7.0	231 31	2 06	3.9
	Engineer's Supplies	233 87	2 15	4.0	210 25	1 88	3.5
	Models and Tools	73 20	67	1.2	100 61	90	1.7
	Vote 122, Item 2	.....	.....	.....	265 05	2 37	4.5
	Special Warrant (Cows)	.....	.....	.....	425 00	3 79	7.3
	" " (Pianos)	.....	.....	.....	965 00	8 61	16.5
	New Boiler in Kitchen	47 50	44	.8	.....	.....	.....
	New Refrigerator	322 76	2 96	5.5	.....	.....	.....
	New Mangle for Laundry	866 50	7 95	14.8	.....	.....	.....
		47,749 66	438 07	811.2	50,876 37	454 25	873.3

Certified correct,
G. H. RYERSON,
Bursar.

UNIVERSITY OF TORONTO

REPORT OF THE

BOARD OF GOVERNORS

FOR THE

YEAR ENDING 30th JUNE

1916

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:

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1916

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TORONTO

UNIVERSITY OF TORONTO

REPORT OF THE

BOARD OF GOVERNORS

FOR THE YEAR ENDING 30th JUNE, 1916

To His Honour the Lieutenant-Governor-in-Council:—

The Governors of the University of Toronto have the honour to submit their tenth annual report, accompanied by the President's report upon the academic work of the University and its Colleges during the Session 1915-16, and the reports of various departments; and by the usual statement in detail of the receipts and expenditures of the Board for the financial year ended 30th June, 1916, which has been duly audited in accordance with the provisions of the University Act.

The transactions of the year include the renewal for 21 years at an increased ground rent of the lease of a portion of Lots Nos. 1 and 2, University Park. Also the acquisition by the Board of the interests of the lessee in another Park lease which had matured. As in the case of the similar purchase referred to in their last report the Board were able to secure this by payments to be spread over a term of ten years without interest. There is a substantial brick house upon the property, which has been altered and fitted up at an expenditure of some $7,000 as an additional Residence for the women students of University College, and is now occupied as such.

The Board also decided during the year under review to make the experiment of setting aside the house No. 85 St. George Street as a Union or Club house for the University College women students and graduates, to be supported for the time being by a fee to be paid by those desiring to avail themselves of the privileges offered, with the possibility of eventually making the institution a permanent one with a compulsory fee. As the house had been used for some years past as a Residence for junior members of the staff, a comparatively small outlay, probably from $1,000 to $1,200, should suffice to equip it for the purpose, while the receipts from the membership fees are expected to very nearly meet the running expenses.

During the year the Board received a payment of $100,000 in connection with certain property fronting on College Street for release of the restrictions hitherto existing in regard to the use of frontages on the Avenue from Queen Street and the cross Avenue from Yonge Street, and in regard to which a portion of the Act of 1913, Cap 75, has been proclaimed by Your Honour to be in force. This payment has been credited to Capital Account in accordance with the practice in the past. The proclamation of the remaining sections of the Act would facilitate the dealings of the Governors with other property owners on the Avenues.

The gross revenue for the year was $864,678. The deduction of interest on special trust funds, $7,808, leaves the net revenue $856,870, as against $905,009 in 1914-15, a decrease of over $48,000. While the sum received by the Board under the University Act of 1906 was $500,000, as against $488,725 in the previous year, the receipts from fees dropped from $269,836 in 1914-15 to $215,312 in 1915-16, a decline of $54,524. There was also a decrease of about $5,000 in the item of receipts from the Central Power Plant as compared with the previous year. Other differences are of minor items and are relatively unimportant, but the Governors have to forecast a still further reduction in receipts from students' fees during 1916-17, due, of course, to the greatly decreased attendance during the war.

The expenditure under the appropriations for salaries and maintenance was $912,359, being lower than that of the previous year ($949,630) by $37,271. The deficit upon Revenue Account was $55,489. There remained also to be met a portion ($15,015) of the deficit of the previous year, as explained in last year's report. The Board have charged these two sums, making together $70,504, to the special grant of $80,000 voted by the Legislative Assembly, leaving $9,496 available towards any deficit upon the operations of the year 1916-17.

All of which is respectfully submitted.

B. E. Walker,

Chairman.

Toronto, 29th November, 1916.

PRESIDENT'S REPORT

1915-16

To the Governors of the University of Toronto:—

GENTLEMEN,—I beg to submit the following report on the academic work of the University and University College during the twelve months ended June 30th, 1916.

The total staff of the University and University College numbered 409, of whom 50 were professors, 54 associate-professors, 17 assistant-professors, 68 lecturers and associates (in medicine), and 218 demonstrators, fellows and instructors with sessional appointments. They are distributed as follows:—

—	Professors.	Associate Professors.	Assistant Professors.	Associates.	Lecturers.	Other Sessional Appointments.
University (Faculty of Arts)	18	13	6	.....	21	49
University College	8	9	2	.....	8	3
Faculty of Medicine	15	23	.....	18	3	109
Faculty of Applied Science	7	5	8	.....	15	27
Faculty of Household Science	.....	2	.....	.....	2	4
Faculty of Forestry	1	.....	2 (1 in Univ.)	.....	1 (in Univ.)	.....
			Chief Instructors.	Assistant Instructors.		
Faculty of Education	1	2	6	17	.....	3

The above figures include persons absent on military service.

In Victoria College there were:

Professors (one in University)	10
Associate Professors	5
Lecturers	5
Sessional Appointments	2

In Trinity College there were:

Professors	8
Lecturers	8*
Readers	3

(*1 on leave of absence.)

In St. Michael's College there were:

Professors	9

In the past two or three years the University has suffered severely by the death of several members of the staff. This year it has been sadly and unexpectedly bereaved by the loss of Edward J. Kylie, who at the time of his death

was serving as captain and adjutant to the Grey County Regiment. Never of very robust health he seems to have overtaxed himself by the conscientious performance of military duties, which he undertook at the call of what he deemed the higher patriotism. As an undergraduate in this University, afterwards also in Oxford, then again as professor here, he made for himself by his pure character, fine culture and unbiased judgment an exceptionally large number of devoted friends. The University will long feel his loss.

The following gentlemen resigned their positions:—

J. Squair, B.A., Professor of French; O. J. Stevenson, M.A., D.Pæd., Chief Instructor in English and History in University Schools and Lecturer in Methods in English and History in the Faculty of Education; A. R. M. Lower, B.A., Instructor in the University Schools.

The resignation by Professor Squair of the Chair of French in University College has brought to a close an honourable career of teaching in and devoted service to this University. Professor Squair is a graduate of the University of Toronto and is widely known beyond the Dominion as a French scholar of high rank. He was one of a group of three—the others being Professors van der Smissen and Fraser—who succeeded in placing Modern Languages in their proper place in the Arts curriculum, and was always a thorough teacher. In addition to the conscientious performance of his work of instruction he established a French Prose Prize for the advancement of French and gave a great deal of his time to general university matters, especially to the Alumni Association. He will continue to be connected with the University in the position of Professor Emeritus.

To our deep regret Miss Salter has asked to be allowed to retire from her position as Lady Superintendent of the women students of University College after thirty-two years of service. The position, which was new when Miss Salter entered upon it, required in the occupant the qualities of discretion and sympathy. These Miss Salter possessed in an eminent degree, and she filled her difficult position with unfailing courtesy, faithfulness and good judgment. She is followed with the goodwill of all the women graduates from University College and of the members of the staff.

Leave of absence was continued for the year to Professor P. Toews on account of illness.

The following promotions and new appointments were made during the year:

In the Faculty of Arts, J. A. Craig, M.A., McGill, B.D., Yale, Ph.D., Leipzig, was appointed Associate Professor of Oriental Languages; Barker Fairley, M.A., Leeds, Ph.D., Jena, was appointed Associate Professor of German; R. M. MacIver, M.A., Edinburgh, B.A., Oxon., D.Phil., Edinburgh, was appointed Associate Professor of Political Science; F. A. Hartman, M.A., Kansas, Ph.D., Washington, was appointed Lecturer in Physiology; R. J. Manning, M.A., D.Sc., Bristol, was promoted from a demonstratorship to a lectureship in Biochemistry; A. W. Peters, B.L., Western Reserve, A.M., Ph.D., Harvard, was appointed Lecturer in Biochemistry; and W. T. Jackman, M.A., was appointed Lecturer in Political Science.

In the Faculty of Applied Science, H. H. Madill, B.A.Sc., was promoted from a demonstratorship to a lectureship in Architecture, and W. J. Smither, B.A.Sc., was promoted from a demonstratorship to a lectureship in Structural Engineering.

In the Faculty of Household Science, Miss L. L. Ockley, B.A., was promoted from an instructorship to a lectureship in Household Science, and Miss W. Cruise B.A., was appointed lecturer in the same subject.

In the Faculty of Education, G. M. Jones, B.A., was appointed Chief Instructor in English in the University Schools and Lecturer in Methods in English; C. L. Brown, M.A., D. J. Gray, B.A., and N. L. Murch, B.A., were appointed Instructors in the University Schools.

The following members of the staff delivered courses at Trinity College:—

P. M. Bayne, M.A., Demonstrator in Biology.
S. A. Cudmore, B.A., Lecturer in Political Economy.
N. C. Hart, B.A., Fellow in Botany.
W. T. Jackman, M.A., Lecturer in Political Economy.
R. M. MacIver, M.A., D.Phil., Associate Professor in Political Economy.
M. A. Mackenzie, M.A., Professor of Mathematics.

The total number of students registered in the University in 1915-16 was 3,868, or apart from the Summer Session and Occasionals in Social Service, 3,284, distributed as follows:—

Faculty of Arts	1,853
Faculty of Medicine	617
Faculty of Applied Science	345
Faculty of Household Science	26
Faculty of Education	437
Faculty of Forestry	32
Department of Social Service	252
Summer Session	353
Registered twice	47

The figures may be further analyzed as follows:—

FACULTY OF ARTS.

University of Toronto.

Candidates for Ph.D.	29	
Candidates for M.A.	73	
Occasional Arts Students	25	
Veterinary Students	108	
	——	235

University College.

First Year Undergraduates	302	
Second Year Undergraduates	210	
Third Year Undergraduates	166	
Fourth Year Undergradutes	174	
Occasional Students	62	
	——	914

Victoria College.

First Year Undergraduates	139	
Second Year Undergraduates	96	
Third Year Undergraduates	103	
Fourth Year Undergraduates	87	
Occasional Students	46	
		471

Trinity College.

First Year Undergraduates	33	
Second Year Undergraduates	21	
Third Year Undergraduates	17	
Fourth Year Undergraduates	18	
Occasional Students	4	
		93

St. Michael's College.

First Year Undergraduates	64	
Second Year Undergraduates	26	
Third Year Undergraduates	31	
Fourth Year Undergraduates	17	
Occasional Students	2	
		140

Faculty of Medicine.

Candidates for M.D.	3	
First Year Undergraduates	137	
Second Year Undergraduates	106	
Third Year Undergraduates	93	
Fourth Year Undergraduates	73	
Fifth Year Undergraduates	96	
Students Returned from Overseas	22	
Dental Students	87	
		617

Faculty of Applied Science.

Candidates for M.A. Sc.	1	
First Year Undergraduates	101	
Second Year Undergraduates	89	
Third Year Undergraduates	82	
Fourth Year Undergraduates	66	
Students of other Faculties	6	
		345

Faculty of Household Science.

Occasional Students	26	
		26

Faculty of Education.

Students registered	437	
		437

FACULTY OF FORESTRY.

First Year Undergraduates	1	
Second Year Undergraduates	14	
Third Year Undergraduates	6	
Fourth Year Undergraduates	10	
Fifth Year Undergraduates	1	
		32

DEPARTMENT OF SOCIAL SERVICE.

Students registered	252	
		252

SUMMER SESSION.

Students registered	353	
		353

Of the 3,868 students, 2,328 were men, and 1,540 were women. The women students were distributed as follows:—

Candidates for Ph.D.	3
Candidates for M.A.	16
Occasional Students in the University of Toronto	6
University College	384
Victoria College	184
Trinity College	53
St. Michael's College	49
Faculty of Medicine	36
Faculty of Household Science	26
Faculty of Education	277
Department of Social Service	242
Summer Session	270
Registered twice	6
	1,540

The numbers examined in the different departments of the University, including those granted standing for military service, were as follows:—

Arts:		
Ph.D.	3	
M.A.	31	
Fourth Year	294	
Third Year	329	
Second Year	384	
First Year	407	
Senior Matriculation	139	
		1,587
Medicine:		
M.D.	1	
Fifth Year	96	
Fourth Year	70	

Third Year	83	
Second Year	62	
First Year	81	
		393
Applied Science:		
Professional Degrees	7	
M.A.Sc	1	
Fourth Year	48	
Third Year	51	
Second Year	37	
First Year	63	
		207

Education	366
Forestry	10
Law	20
Degrees in Pedagogy	21
Pharmacy	38
Music	10
Dentistry	201
Agriculture	50
Local Examinations in Music	645
Veterinary Science	10

The degrees conferred were:

LL.D. (Honorary)	12
D.Sc. (Honorary)	1
Ph.D.	3
M.A.	28
LL.B.	9
M.D.	2
M.B.	93
B.A.	288
C.E.	3
M.E. (Mining)	1
M.A.Sc.	1
B.A.Sc.	82
B.Paed.	1
D.Paed.	1
D.D.S.	43
B.S.A.	50
B.Sc.F.	8
Phm.B.	36
B.V.S.	9
Mus Bac.	2
	673

In December Mr. Rustom Rustomjee delivered a lecture on "The Place of India in the British Empire."

Again Mr. F. A. Mouré has laid the University under deep obligation by arranging the fourth series of Organ Recitals, in which he himself delivered several

highly appreciated recitals. Those besides Mr. Mouré who took part were: Professor G. W. Andrews, Oberlin Conservatory of Music, Dr. T. Alexander Davies, Mr. Grenville B. Frost, B.A., Mr. James Galloway, A.R.C.O., Mr. Otto James, Mr. H. G. Langlois, B.A., Toronto, Mr. Albert D. Jordan, London, and Professor H. L. Vibbard, of Syracuse University.

At the opening of this session the full effects of the war began to be felt. A greatly diminished enrolment was the first evidence of what was to follow as the academic year ran its course. From every department came the same story of reduced numbers and of the strain under which the students were doing their work. Athletic activities were confined to interfaculty or intercollegiate games and played no large part in the general life, the university grounds being occupied at all hours of the day by companies of men under drill; the usual social interests were lessened or vanished.

The total attendance is at first sight not so much less than in the former year as might have been expected, but an analysis of the figures shows that the number of men students registered in University College was 530, as compared with 604, and in Applied Science 345, as compared with 563, in Forestry 32, as compared with 48 in the preceding year. As is indicated also in the reports of the Principal and the Deans this registration was much higher than the actual attendance became after the middle of the session. Undergraduates enlisted in large numbers, and exemption from examination at the end of the year was given to 352 who had gone on active service. Thus the attendance at the end of the year rather than registration at the beginning shows the drain made by the war on the student body. As regards enlistment, Principal Hutton reports 383 undergraduates from University College. In his Greek classes there were losses through enlistment averaging over 50 per cent. and running as high as 75 per cent. A similar story might be told of the other departments in the College. Victoria and Trinity Colleges suffered quite as severely if, indeed, not more. The Faculty of Medicine retained its normal attendance more nearly than any other. This was mainly due to the fact that the War Office had recommended that students of the final two years should not enlist, but should complete their course in order to serve as qualified medical officers, and partly because it was felt that the increasing demand for such officers in the near future made the call for enlistment as regular combatants less urgent than it was on students in the other faculties. As was to be expected, the faculties of Applied Science and Forestry during the session sent a large quota into active service amounting to 149. The Faculty of Education had a strong company of the Officers Training Corps and gave its share of recruits. At the end of the academic year standing in their years was granted to 268 men on active service; degrees were granted to 84 enlisted men.

The records show that 96 of the staff were on active service. Their names are as follows:—John Andrew Amyot, Robert Gardiner Armour, Paul Balbaud, Louis Auguste Bibet, George Florian Boyer, George Neville Bramfitt, Thomas Gregor Brodie (Ob), Herbert Alexander Bruce, Edward Cecil Burson, Irving Heward Cameron, George Alexander Campbell, William L. D. Carnie, Michele Carlo Emmanuele Catalano, Alfred Hans Waring Caulfeild, Graham Chambers, George Alton Cline, Herbert Ernest Clutterbuck, Charles Norris Cochrane, James Roy Cockburn, Cooper Edward Cole, Alan Freeth Coventry, Malcolm McLachlan Crawford, B. Harold Dickson, George Sharpe Eadie, Oscar Pelham Edgar, Arthur Bertram Fennell, Andrew Almon Fletcher, John Taylor Fotheringham, Robert Edward Gaby, John Stupart Galbraith, John Gordon Gallie, Lachlan Gilchrist, Perry Gladstone Goldsmith, Andrew Robertson Gordon, Duncan Archibald Lamont Graham, Velyien

Ewart Henderson, William Belfry Hendry, Samuel Ross Delap Hewitt, Robert Home, Cyril G. Imrie, J. Powell Jones, Kenneth Hay Kingdon, Frank Boteler Kenrick, Edward Joseph Kylie (Ob), William Robert Lang, James Miles Langstaff, Arthur d'Orr Lepan, Thomas Richardson Loudon, Gladstone Wilfred Lougheed, Arthur Reginald Marsden Lower, Arthur Wellesley McConnell, Donald McGillivray, Alexander John Mackenzie, John Joseph Mackenzie, Patrick Walter Hughes McKeown, John Harris McPhedran, Henry Allen McTaggart, Charles Stanley McVicar, Samuel John Newton Magwood, William John Ogilvie Malloch, Henry Gordon Manning, Frederick William Marlow, Charles Vincent Massey, Percival Keith Menzies, Horace Owen Merriman, James Sims Mitchell, Ezra Henry Moss, John Henry Mozley, George Henry Needler, Francis Owen, Frank Stanley Park, Harold Campbell Parsons, Robin Pearse, George Rowe Philp, Alexander Primrose, Thomas Bedford Richardson, James Alexander Roberts, David Edwin Robertson, Lawrence Bruce Robertson, John Daniel Robins, Gilbert Royce, Robert Dawson Rudolf, Edward Stanley Ryerson, Wallace Arthur Scott, Noble Carman Sharpe, Harry James Shields, David King Smith, George Malcolm Smith, George Stewart Strathy, Ross Taylor, Malcolm William Wallace, William Stewart Wallace, Benjamin Philp Watson, Ralph Hodder Williams, George Ewart Wilson, Clarence Richard Young.

The records of enlistment contain the names of 1,736 graduates, 1,368 of whom were officers and 368 in ranks; 1,268 undergraduates, 557 officers and 711 in ranks; 12 in Y.M.C.A. work at the front, 11 graduates and 2 undergraduates, in all 3,016. There are 113 who have fallen. Their names are:—

Henry Harold Allen, Hubert Gordon Allan, Charles Laidlaw Anderson, Frederick Charles Andrews, Gordon Stewart Andrews, Panayote Percy Ballachey, Alfred Carbert Bastedo, William George Henry Bates, Gerald Edward Blake, Thomas Gregor Brodie, George William Bruce, Leo Buchanan, Duncan Frederick Campbell, Robert Alexander Rankine Campbell, Warren Knight Campbell, James Russell Chamberlin, Arthur Willoughby Chesnut, Philip Fred Chidley, Allen Charles Mackenzie Cleghorn, Charles Penner Cotton, Russell Andrew Cross, Gordon Willson Crow, Carl deFallot, Kenneth Brown Downie, George Gordon Duncan, Frederick Lawrence Eardley-Willmott, Judson Harold Ellis, Shirley Duncan Ellis, William Laurance Evans, James Stephenson Fleming, Finlay David Fraser, Harry William Frogley, George Gordon Galloway, Francis Egmont Gane, John Ure Garrow, Paul Archibald Gillespie, George Clarence Gliddon, Thomas Leon Goldie, Henry Russell Gordon, Thomas Seton Gordon, Oswald Wetherald Grant, Hugh Alexander McKay Grasset, Henry Greenwood, Daniel Galer Hagarty, David Elliot Haig, Henry Arthur Harding, Thomas Leslie Harling, Joseph Grant Helliwell, Maurice Russell Henderson, John Emerson Hill, Henry Boyd Hodge, Herbert Spencer Holcroft, Fred Holmes Hopkins, Asa Milton Horner, Chester Hughes, George Leycester Ingles, Oscar Irwin, Robert Crawford Jamieson, Trafford Jones, Thomas Ewart Kelly, Stuart Kennedy, Herbert Norman Klotz, Edward Joseph Kylie, Norman Lawless, Alfred Edward Lawton, John Gordon Lumsden, Hugh Edward McCutcheon, Archibald Walter Macdonald, Alister Munro Mackenzie, George Lawrence Bissett MacKenzie, William Stewart McKeough, Howard James MacLaurin, Dugald Black McLean, Edgar Harold McVicker, Maurice Irving Machell, John Reginald Maguire, Maurice Edward Malone, Malcolm Smith Mercer, Herbert Stanley Monkman, Arthur Edward Muir, Harold Heber Owen, Henry Errol Beauchamp Platt, Roy Irvine Poast, Howard Primrose Primrose, Arthur Harper Qua, George Ernest Revell, Ronald McKenzie Richards, James Ernest Robertson, George Crowther Ryerson, Charles Edward Sale, Wesley George Shier,

Joseph Cuthbert Shipton, Colin Simpson, Ernest Alroy Simpson, Arthur William Tanner, Geoffrey Barron Taylor, Ross M. Taylor, Arnold Munro Thurston, Norman Ewart Towers, Kenneth Marsden Van Allen, George E. Vansittart, Frederick William Walsh, Robert Edward Watts, James Symington Wear, Edward Alfred Webb, Maurice Fisken Wilkes, William Hartley Willard, Chester Matthew Willey, George Knox Williams, William Taylor Willison, Harold Mackenzie Wilson, Norman James Lang Yellowlees, and Martin C. de Bude Young.

The following eight are missing:

Arthur Stuart Anderson, Joseph Alburn Bassett, John Harvey Douglas, Guy Pierce Dunstan, Victor Archibald Ferrier, Angus Douglas Graham, Melville Elliot Lobb, Harold Verschoyle Wrong.

The enlistment has been growing and the roll of the fallen is lengthening rapidly.

The work of the Officers Training Corps was continued, and though, as was to be expected, the enrolment was not as large as in the previous year, it was nevertheless very good. At the inspection held at the close of the Easter Term 791 members were declared efficient and 117 members were granted proficiency Certificate A, i.e., lieutenant's qualifications. During the past six months 85 candidates for Imperial Commissions were sent to England and accepted by the War Office. On September 1st, 1916, as far as could be ascertained, 1,278 members of the corps were on active service.

A committee was appointed early in the session to impress upon the students the seriousness of the issues involved in the war. For this purpose the staff was asked to keep the situation before the minds of the students; short, signed articles were inserted in "Varsity," and the undergraduates of University College and the faculties were addressed in groups by the President and members of the staff.

An overseas unit of the Officers Training Corps was authorised, with Professor G. H. Needler as Commanding Officer. Professor M. W. Wallace also is assisting in this unit. Also an Artillery Battery, No. 67, was authorised to be officered by graduates of this University, who are recommended to the Minister of Militia by the Commanding Officer of Military District No. 2. The purpose aimed at in securing the establishment of both these units was to afford an opportunity for undergraduates, and those who might desire to join such a unit, to get training in familiar environment before taking their commissions, or to serve in the artillery in congenial company. It was believed, as has also proved to be the case, that by the presence of these two units in the University a ready opportunity of enlistment would be taken advantage of by many students. The position of these two units is, Officers' Company enrolled 168, of whom 75 have gone overseas; the Artillery Battery, over 200 men enlisted since the spring, nearly all of whom have at the time of writing gone overseas in drafts. It is hoped that during the coming session the value of these units will continue to be manifested.

The University also played an important part in the work of instruction connected with the various military schools, especially the Provisional School of Infantry under Lt.-Colonel Lang and the School of Musketry under Major Massey, who had associated with them members of the university staff. The grounds and several buildings of the University were used for the purposes of this instruction.

It is particularly gratifying that No. 4 Canadian General Hospital (University of Toronto) has done excellent work. At the request of the War Office the staff willingly undertook the difficult duty of service in Salonica, arriving there in November, 1915, under peculiarly trying climatic conditions, with the earliest

troops and when the need was very pressing. During the earlier part of the winter the hospital was often crowded to excess, but by hard effort and team work the staff not only did all that they were asked to do, but won high commendation from those in authority for the character of their work. By their medical and surgical skill, the conduct of their laboratories and their loyalty, the members of the staff have brought great credit on themselves and on the University.

The success of the hospital is partly due to its splendid equipment, for which the Ladies' Supply Association and a large number of friends are to be thanked. I may here briefly outline the work carried on by the Hospital Supply Association under the direction of the ladies of the University. Since the beginning subscriptions, fees and bank interest amounted to $50,963. Disbursements have totalled $45,510. The packing between April, 1915, and October, 1916, amounted to 1,328 large cases of hospital supplies, 667 going to No. 4 Hospital, 654 to the Canadian Red Cross, and seven cases of socks to the Secours National. Of sheets there were 8,751, pillowcases 14,860, towels 44,804, pyjamas 7,575, pairs socks 11,802, surgical shirts 12,615, bedjackets 1,913, dressing gowns 528, grey flannel shirts 942, work clothes 21,540, surgeons' gowns 845, masks 276, surgical nurses' caps 290. Bandages alone filled 84 cases, and besides those mentioned thousands of articles have been despatched—pillows, quilts, rugs, hotwater bags, Testaments, etc. In addition the Association has given the Canadian Red Cross 42 large cases of factory-made bandages. There was also a total of 1,146,575 pieces of surgical supplies, including pads, compresses and sponges. Gifts of time, material and money came from many sources—churches and church societies and organizations all over the country—and there was a prompt and generous response from the smaller towns and the country districts.

Other generous donations to the hospital were: Contributions for laboratory and other equipment, $14,302.17; the Westminster Chapter, Imperial Order Daughters of the British Empire, Cleveland, Ohio, $9,062.50, besides the gift of $40,000 from the Fulford estate, which I reported last year.

The thanks of the University are due to all those who have taken a share in the equipment and maintenance of No. 4 Hospital.

In several other military hospitals in France and in England members of the University staff have rendered valuable service.

The manufacture by our Biological Products Laboratory of tetanus antitoxin for the Militia Department and the War Office was continued through the past year, and at the time of writing over $15,000 worth has been provided at cost. I wish to direct attention to Dr. Fitzgerald's report, which outlines the large way in which the University, through this laboratory, has co-operated with the Provincial Board of Health.

As will be seen in the report of the Dean of the Faculty of Applied Science a number of the staff of that faculty were employed for part of their time in the work of munitions. Valuable investigations were also conducted by Professor McLennan in the Physics Laboratory for the War Office, and in Physiology by Professor Brodie in investigating the physiological effects of wounds on the respiratory processes.

Also the work of the Speakers' Patriotic League, which has had a far-reaching effect on recruiting, was conducted in the University under the direction of Dr. A. H. Abbott, who for this purpose was relieved of some of his regular academic duties.

In October, 1915, when the special contribution was being raised for the British Red Cross Fund, the University, its Colleges and Hospitals contributed

$7,339, of which $3,935 came from the staff and $3,404 from the students. Also the staff of the University, its Colleges and Hospitals, contributed during the campaign for the Toronto and York County Patriotic Fund in January the sum of $12,453.

During the year M. and Madame Ledoux, who came to us from the University of Brussels, were the guests of the staff of the University and formed a large circle of friends.

The only matter in connection with the Faculty of Arts to which I shall refer is the arrangement as to specialist courses, which has been completed, and is inserted in the Calendar for 1916-17. The requirements for the specialist courses of the Department of Education involve difficult and complicated questions because not only has the Department to take into account the honour courses of this University, but also of the other Universities of the Province. It is, therefore, a satisfaction that a clear understanding has now been reached in this matter.

In the Faculty of Medicine the work of the year was conducted under difficulties on account of the absence of a large number of the staff on active service. This reduction in the staff was felt especially when, in response to a request from the War Office, it was decided to hold a session for the fifth year, beginning on May 1st, 1916, immediately on the close of the winter's work. It was undertaken in order to allow the graduates to enlist for service in December, 1916.

The extension of the medical course from five to six years, which has been under consideration by the Faculty for some time, was recommended to the Senate before the close of the academic year and the proposal has since been adopted, to come into effect in 1918. The demand for the lengthening of the course is due to the advance of medical education. Hitherto the five years have been divided between the preliminary sciences and clinical instruction, two and a half years for each; but the teachers in both sections have long been complaining that they have too little time for their subjects. The lengthened period has been required for several years in the larger medical schools of the United States, and already the University of Manitoba has adopted the six years course. McGill University also is ready to make the advance along with us. The first year of the new course will be devoted entirely to the pure sciences—Physics, Chemistry and Biology—together with English and perhaps one language.

The appointment by the Provincial Government of a Commission on Medical Education was an important event in the medical world. The President of the University and the Dean of the Faculty of Medicine, together with Dr. Lash from the Board of Governors, appeared before the Commissioner, Mr. Justice Hodgins, and outlined the equipment, standards and aims of the Faculty of Medicine, and presented the case for granting greater recognition to our degree in medicine.

Though the numbers of the Faculty of Applied Science have been greatly reduced and less space was required than in recent years, especially in the Department of Drawing, insistent demands continue to be made for improved conditions in the Departments of Applied Mechanics and Electrical Engineering. The old building is cold and very inconvenient, and in fact is so filled with apparatus that in some rooms even small groups of undergraduates are crowded. With the increase of students after the war the state of the building, to which attention has been drawn for many years, will demand immediate consideration. I agree with the suggestion made by the departments interested that the Governors should authorise the preparation of plans for a new building.

The Ontario Government has asked Professor Guess to undertake work in Metallurgy and has provided the installation of a special furnace for this purpose.

It is probable that more investigation of this kind may be undertaken in the near future.

I should like to call attention to the remarks in the Dean's Report as to the relation between this faculty and the movement for the greater application of science to industry. The essentials for this extremely important development, which is attracting great attention in Britain, are more laboratory space and some increase in the staff. Much can be done in the University without a very large expenditure of money.

In the Faculty of Education there has been a large attendance, 437 being registered. Every year a number of those registered take their work extramurally, in 1915-16 sixty, in 1914-15 thirty-five. This large attendance puts a very heavy strain upon the Dean and the members of the teaching staff. Additions should be made to this faculty as soon as possible. Another urgent requirement for this faculty is the equipment of a house in which the women students can have a centre for their social and academic activities, what is usually called a union. The three hundred young women in this faculty have no place, except a basement, in which even to take their lunch, and there is not a woman on the faculty or in the buildings who can in any way give them advice or help. When it is borne in mind that the great majority of these young women come to the city merely for one year, are without friends, have to find rooms and board at low cost, and return at the end of eight months to their towns or villages to teach the youth of this province, it becomes evident that this university has been neglecting a most important part of the education that is necessary to fit them for their duties as teachers. At comparatively small cost the house which is now closed and is an eye-sore, a source of danger from fire, and is rapidly becoming more dilapidated, could be made into excellent quarters for the purpose of a union, and a suitable lady could be secured who might be resident and also a member of the staff. A small fee from each student would go a long way to meet the expense.

During the year an important development was carried out which will certainly tell upon the future of this university, in the reconstitution of a Board of Postgraduate Studies, and the establishment of five new research fellowships. Much time was occupied with the drawing up of regulations and the definition of courses, which have now been set forth in the calendar on graduate work issued for the first time at the close of the academic year. Through the liberality of Sir Edmund Osler, who has offered two scholarships, Mr. J. W. Flavelle and Colonel R. W. Leonard, who have each offered one, of the annual value of $500, an excellent commencement in the way of encouraging graduate work has been made. These fellowships are to be offered in the first instance to students from outside Ontario, especially from the West. The Toronto Alumni in the United States have also provided for the coming year a fellowship of like value in Biochemistry, and the thanks of this University are due to them for their continued interest in their Alma Mater. The Mackenzie Fellowships in Political Science have been increased to $500 each and made tenable by graduates of other universities. This is but a beginning. After the war we may hope to have the number of these fellowships increased so that the University may draw to itself many of the most promising graduates of other Canadian universities to pursue their advanced work here. In addition to scholarships, facilities for instruction must be provided or increased, especially in the development of the library and the increase of the staff in some of the departments. As I said in my last report, this graduate work is not only beneficial to the life of the university, but is of great national value in educating

in this University of an old Province many who would otherwise find themselves under the necessity of going to the United States, probably in most cases not to return. It will create new ties between East and West, Old and New. I hope to be able to present a report next year of the work carried out by the new Board.

Again this year evidence has been afforded that the University is not without its benefactors. Colonel Albert E. Gooderham has bought 50 acres of land, and under his own careful supervision has erected splendid laboratories for the manufacture of sera and antitoxins, which on completion are to be handed over to the University. I would refer to Dr. Fitzgerald's report in the Appendix for the full description of this munificent gift. Mrs. H. D. Warren has also continued her donation of the salary of the Director of Social Service. The late Mrs. Massey Treble has engraven her name still more deeply upon this university by the legacy of $100,000 for the support and development of the Department of Household Science. In past years mention has been made of the Medical and Surgical Research Funds, to which Sir John Eaton, Sir Edmund Osler, Colonel R. W. Leonard, J. L. Englehart, Esq., and Dr. George E. Cook have made handsome contributions, and I have already referred to the four new portgraduate fellowships established at the close of the year. The report of the work of the Medical Research Fund will be found in the Appendix. Mrs. Balmer has also given $1,000 to institute in University College a scholarship in the first year science course in memory of her daughter, who was a distinguished graduate of this university. Also a legacy of $25,000 has been received from the E. C. Walker estate towards the erection of a men's residence in the University. In addition to these gifts there is a constant stream of donations flowing into the Royal Ontario Museum, of which this University and the Government of Ontario have joint control.

The returns of the Bursar are an evidence of the rigid economy that has been practised by the staff of the University during the past year. Fortunately those in charge of several of the scientific departments had laid in good supplies of glass and chemicals, and by their sparing use, partly also by reason of reduced numbers, they were thus saved the necessity of making large purchases when the prices, owing to war conditions, were unusually high. The only department which may suffer permanently from reduction is the library. It is false economy to reduce greatly the purchase of books; a good library is at the basis of all research. In the immediate future this country will find it necessary to foster investigation, which, however, will be dependent upon the equipment of the centres in which it may be conducted.

A special convocation was held in September, 1916, for the purpose of celebrating the one hundred years of peace between Great Britain and the United States by conferring the honorary degree of LL.D. upon the Hon. Joseph H. Choate, President Nicholas Murray Butler, William B. Howland, Esq., William Church Osborn, Esq., Alton Brooke Parker, Esq., and John A. Stewart, Esq. The occasion was made memorable by the address of the Hon. Mr. Choate and by the feeling of goodwill given expression to by the other visitors.

The second annual meeting of the Universities of the Dominion was held in Montreal and was well attended by representatives from nearly all the universities. The meetings lasted for a day and a half and the time was devoted chiefly to discussion on the medical curriculum, postgraduate work, and the expansion of science in its application to industry. A strong national spirit is being created in these universities, and the effort is being made to co-ordinate their work so that they may become more mutually helpful and that students may readily pass from one to the other and have the opportunity of receiving the highest possible training

in our own country. A committee was appointed to inquire into the possibility of entering into such relations with the Universities of Britain and France as will draw our universities to them even more closely than in the past.

All of which is respectfully submitted.

R. A. FALCONER,
President.

October 21st, 1916.

APPENDIX A.

(1) Report of the Principal of University College.
(2) Report of the Dean of the Faculty of Medicine.
(3) Report of the Dean of the Faculty of Applied Science.
(4) Report of the Dean of the Faculty of Forestry.
(5) Report of the Dean of the Faculty of Education.
(6) Report of the Librarian.
(7) Report on University Extension Work.
(8) Statement regarding the Biological Museum.
(9) Statement regarding the Geological Museum.
(10) Statement regarding the Palæontological Museum.
(11) Statement regarding the Mineralogical Museum.
(12) Report on the Medical Research Fund.
(13) Report of the Director of the Antitoxin Laboratory.
(14) Report of the Director of Courses in Social Service.
(15) Report of the Physical Director.
(16) Report of the Superintendent of the Dining Hall.

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(1) REPORT OF THE PRINCIPAL OF UNIVERSITY COLLEGE (PROFESSOR HUTTON).

The attendance of men at University College this year, both before the Session 1915-16 began and since it began, begins to show the effect of the war in the only way in which the College can honestly testify to it, and in the only way in which, all things considered, it is desirable that it should so testify. The numbers of men registering last September fell off by some two hundred from the numbers of the previous September, and of those actually then registered the numbers of those still continuing to attend is falling daily; each day sees further names withdrawn for transference to some battalion at the front or at some other Canadian camp or for transference with a commission to a training camp in England or for immediate service in the trenches and with the artillery.

The war preoccupies every one, mind and body, and preoccupies even our buildings. The academic record of the year is therefore uneventful; while the social record is a blank. The actual numbers of graduates and undergraduates from the College already at the front at the present date may be estimated somewhat roughly as follows:—

Graduates:		
Officers	238	
In ranks	113	
Total		351
Undergraduates:		
Officers	199	
In ranks	184	
Total		383
		734

The deaths number 39; the Roll of Honour includes also the following distinctions:—

C.M.G.

Col. J. T. Fotheringham ..... B.A. (U) 1883
M.D., C.M. 1891
Lt.-Col. G. G. Nasmith ..... B.A. (U) 1900
Ph.D. 1903

C.B.

Brig.-Gen. M. S. Mercer ..... B.A. (U) 1885
(Killed)

D.S.O.

Capt. F. Morison ..... B.A. (U) 1900
Lieut. T. D. Hallam ..... Arts (U) 1906-08

Military Cross.

Major P. P. Acland ..... B.A. (U) 1913
Capt. J. E. Hahn ..... Arts (U) 1909-13
Capt. V. F. Stock ..... B.A. (U) 1912
M.B. 1915
Lieut. J. C. Auld ..... Arts (U) 1917
Lieut. P. W. Beatty ..... B.A. (U) 1911

Cross de Guerre.

Lieut. E. Peplar.
Cpl. C. E. Rochereau de la Sabliere.

Knighted by King of Italy.

Chevalier W. E. Doherty ..... Arts (U) 1911

Mentioned in Despatches.

Maj-Gen. M. S. Mercer (killed) ..... B.A. (U) 1885
Col. J. T. Fotheringham ..... B.A. (U) 1883
M.D., C.M., 1891
Lt.-Col. J. J. Creelman ..... B.A. (U) 1904
Lt.-Col. G. G. Nasmith ..... B.A. (U) 1900
Ph.D. 1903

Captain J. E. Hahn	Arts (U)	1909-13
Capt. A. C. Ryerson	Arts (U)	1917
Lieut. S. S. Burnham	B.A. (U)	1911
Lieut. T. D. Hallam	Arts (U)	1906-08
Lieut. R. G. Hamilton	Arts (U)	1912-14
Lieut. M. E. Malone (killed)	Arts (U)	1917

As for academic changes, Professor Craig has replaced Professor Benzinger in the department of Arabic; and Professor Fairley (from one of the newer Universities of the North of England and from Edmonton) has succeeded Professor Mueller; the teaching in these departments has not suffered for the change.

It has not yet been found possible to replace the gap left by the death of Professor Stevenson: this is at the moment our crying academic need: other needs are at once social and academic at the same time.

As Hart Hall approaches completion, the need of similar advantages for the women students of University College is making itself felt more urgently; there is an ever-increasing body whose numbers and increase are unaffected even by this war, and for whom Queen's Hall, with its roll of 90 names, is quite inadequate.

The College needs for its women, halls and rooms for debating, for reading, for music, and for rest and needs still more the presence at the head of such a place of a woman who can not only, if necessary, hold a position on the staff, but who shall also have the time and the gifts and the training, and experience qualified to make her of use to the women students in the indirect and therefore the all-important interests of their University life, outside the lecture rooms and lecture halls. Little or nothing can be done at present on the scale of Hart Hall, but a beginning should be made for the women, and a good Dean in charge of a much smaller place with a good spirit animating it will do as much and more than bricks and mortar. I subjoin the usual tables showing the distribution of students among the different courses.

(2) Report of the Dean of the Faculty of Medicine (Dr. C. K. Clarke).

The events of the year have been largely complicated by the military situation and the staff has found it extremely difficult, reduced as it is in numbers, to meet every condition as satisfactorily as could be wished. Possibly if the number of students had been reduced, as expected, the difficulties would not have been so great, but as the registration was 527 the reduction from the average was scarcely noticeable. Members of the staff have made the sacrifice cheerfully and willingly, realizing that in this way they were able to do their bit.

As you are aware, the military authorities asked us to put on a special session for the Fifth Year and that commenced on May 1st. This means that practically the whole staff has to do double duty in order to equip a number of young graduates sufficient for the demands of the War Office.

The undergraduates in Medicine on active service numbered 138, but 42 students of the Fourth and Fifth Years have been returned by the Imperial War Office to complete their courses in Medicine. So far, casualties have been comparatively slight. One has been killed and a number wounded, but the wounded as a rule have done well and made good recoveries. Our students are to be found in every branch of the service, from aviation corps to submarine crew. Lieut. H. H. Owen, who was killed in action on January 30th, was recommended for the D.S.O., and was mentioned in the official despatches seven times for conspicuous bravery. A

Second Year student, J. E. McGillivray, has been recommended for the D.C.M. for his bravery and conduct recently at St. Eloi.

The great majority of the graduating class of 1915 have gone overseas, and of the class of 1916 nearly all have qualified for military service and will go to the front when called upon.

The death of Captain Norman Yellowlees, who was with the University Hospital at Salonica, is deeply regretted.

The question of a six years' course in Medicine has occupied the attention of the Faculty very constantly during the year, and it is more than evident that the five years' course, as carried on at present, does not meet all the requirements; the Third Year especially is the subject of a great deal of well-deserved criticism. It becomes more and more evident that it will be much better for both student and University when the student comes to us better prepared in the preliminary sciences, and the whole subject of Medicine has so developed that it is useless to endeavour to prepare men properly in less than six years. The consensus of opinion leans in this direction, and if we are to live up to the best ideals we shall have to adopt a six years' timetable, just as soon as this can be put in force without disturbing the work of the High Schools and Collegiate Institutes.

The members of the staff have shown the greatest devotion to duty in the University, and while the majority of them would willingly and cheerfully go to the front, they have recognized the necessity for staying home to carry on the preparation of the students for their stern duties across the sea.

(3) Report of the Dean of the Faculty of Applied Science and Engineering (Dr. W. H. Ellis).

I beg to submit the following report on the work of the Faculty of Applied Science and Engineering during the past academic year.

The number of students registered in the Faculty in 1915-16 was 341, distributed as shown by the following table:—

First Year Undergraduates	102
Second Year Undergraduates	89
Third Year Undergraduates	84
Fourth Year Undergraduates	66
	341

Of these, 119 completed the year and 134 enrolled for active service overseas. Three members of the permanent staff enrolled for active service overseas: Asst. Prof. J. R. Cockburn, Captain 110th Battalion, C.E.F.; Asst. Prof. T. R. Loudon, Capt. and Adjt., No. 1 Construction Battalion; Asst. Prof. A. Wellesley McConnell, Capt. and Adjt., 116th Battalion, C.E.F. Of the sessional appointments the following are on active service:—

Lecturers.

R. H. Hopkins, Lieut. and Sig. Officer, 39th Battalion, C.E.F.
J. M. Langstaff, Lieut., 75th Battalion, C.E.F.
J. W. Pickup, Lieut., 220th Battalion, C.E.F.

Demonstrators.

J. S. Galbraith, Lieut. and Asst. Adjt., 123rd Battalion, C.E.F.
G. H. Hally, Gunner, 26th Battery, C.F.A.
H. O. Merriman, Flight Sub-Lieut., Royal Naval Air Service.
A. L. Steele, Canadian Engineers, 4th Brigade Signal Station.
G. K. Williams, Flight Sub-Lieut., Mechanical Supt. of Air Training School, Detling, England.
W. J. T. Wright, Lieut., 67th Depot Battery, C.F.A.

In addition to these, Capt. C. R. Young, Asst. Prof. of Structural Engineering, and Capt. H. H. Madill, Demonstrator in Architecture, have been appointed upon the staff of the School of Instruction (Infantry) M.D. No. 2.

Regarding the C.O.T.C., at the beginning of the session 278 enrolled, which number was reduced during the session through enlistments, etc., to 176 at the time of inspection, and those were all declared efficient. Thirty-five students took the examination for certificate "A," of whom 24 were successful. Thirty-three Applied Science students were accepted as candidates for commissions in the Imperial Army, in accordance with the offer made by the War Office in November last. Sixteen students hold commissions in C.E.F. Battalions.

Prof. Haultain desires to call attention to the mining engineers of the class of 1914. There were twenty-five men in this class; of these nineteen have been on active service. Four of these have died at the front. Of the six not on active service, one is in Arizona, and two in South America. For the remaining three we have no address.

Last week, in Ottawa, Col. Maunsell addressed about sixty officers at the Training Depot for Canadian Engineers, asking for those who could qualify and volunteer to join at once a tunnelling corps in France. Six men volunteered, five of whom were our men.

I am enclosing the reports of the Heads of Departments.

During the year that has passed, as during previous years, the Faculty of Applied Science has devoted its energies to what is beyond all question its first duty, the preparation of young men to fill vacancies in the junior ranks of the Engineering, Chemical, Mining and Metallurgical professions, with such a training as may as far as possible render them useful to their employers and enable them to take advantage of their opportunities for improvement and advancement in their calling.

During the thirty-nine years this Faculty has been in existence, first as the School of Practical Science, and afterwards under its present designation, it has trained and sent out some 1,500 graduates. The responsible positions held by these graduates in various parts of the world, and in all branches of engineering, as well as the staunch loyalty which they have always evinced and continue to evince to their Alma Mater give me the right, I hope, to claim for the Faculty in the performance of this their first duty some measure of success.

During these years this Faculty, with a staff barely sufficient to fulfil this single function, has nevertheless kept in touch with the industrial and business world and advised and assisted in manufacturing and industrial problems, as well as made contributions to the literature of both pure and applied science. The varied nature of these investigations you are already familiar with from the report made to you recently by the Council on this matter.

It seems to me, however, that the time has come when something more may be demanded of this Faculty. Unless it takes up an aggressive attitude in exerting itself to extend the bounds of Applied Science, it cannot hope to maintain the

honourable place which it has won among Engineering Schools. Such schools in our own and other countries have definitely entered upon an avowed policy of fostering and encouraging research with the view of extending the area of the organized knowledge of nature in order to place it at the disposal of industry. Such a step in advance is, however, quite impossible without increased financial support from some quarter or other. The members of our staff cannot contribute more than they are doing to scientific investigation unless special provision is made for this purpose. Research work involves such laborious, time-consuming operations, requires such continuous concentration and makes such demands upon the nervous energy of the investigator that it is vain to expect results of value from such laboratory work as can be squeezed into odd hours between the regular duties of teaching, when such duties claim as much of the investigator's time as has been, and is the case, with the teaching staff of this Faculty. A study of research laboratories the world over, and contact with investigators in all countries emphasizes the special nature of research work, and the necessity, if much of real value is to be accomplished, of relieving those who perform or conduct such work from much of the routine work of lecture and laboratory teaching. I would, therefore, beg to urge that as soon as possible a Research Department, or, as I would prefer to call it, a School of Engineering Research, be established within the Faculty of Applied Science and Engineering, whose avowed function would be scientific investigations on problems bearing on or suggested by the industries of the country. Such an organization would possess many advantages.

1. It would foster the scientific atmosphere, which would have very beneficial results both on the undergraduate students and the teaching staff.

2. It would provide research work for graduate students in all branches of engineering, and thus retain within the university men who otherwise would go to foreign universities for postgraduate study and work.

3. It would be of direct assistance in the development of the resources of our country in the establishment of new industries and in the development of old ones.

In this way the engineering and industrial and business world would be brought closely into co-operation, and such an organization would be worthy of financial assistance from both private individuals and large corporations.

For the realization of this ideal greatly increased laboratory space and equipment will be ultimately required and ought to be planned for from the outset. A new Engineering building for the Departments of Electrical Engineering and Strength of Materials is and has been for some time a crying need, as pointed out again and again in the reports of my predecessor.

I have repeatedly urged the need of a laboratory of Technical Chemistry; and the situation of the University in the centre of the great clay industry of Canada calls for a laboratory of Ceramic Engineering.

In my opinion, however, in consideration of the times in which we are living and the condition of public opinion, it would be a mistake to wait for what we should like to have before beginning to do what we can with resources within our command. Such a start could be made if we could have a few (say seven) research assistants at salaries of $1,500 to $1,800, and if a fund of (say $5,000) to be placed at the disposal of a committee of the Council to defray the cost of special apparatus and supplies required in research.

These research assistants would act in some instances as investigators, working under the direction of the members of the staff: in other instances as lecturers and teachers, thus securing to those members of the staff who wish, themselves, to per-

form research a partial liberation from teaching duties. To obtain results from such an organization it must not be forgotten that time is essential. Facts all go to show that months and years are required in order to secure success, the more important is an early start, and therefore it seems to me important that such a new department should be inaugurated without delay, if possible at the opening of next session, so that work may be planned by the staff and the services of capable men secured.

(4) Report of the Dean of the Faculty of Forestry (Dr. B. E. Fernow).

The registration at the beginning of the session showed a considerable reduction below the number of the previous year, namely 32, and of these only three new students registered, the others being students previously in attendance. At the end of the session, however, the number had dropped to ten, the reduction being due mostly to enlistments.

Of the nine members of the fourth year, one enlisted within the first month, six remained for the first term or longer, and two to the end of the session. The six who enlisted after a half-year's work, all being first-class students, the Faculty decided should receive their degree *honoris causa,* it being understood by them that after their return, they would voluntarily make up their deficiencies with the aid of the Faculty. The same condition was imposed upon those of the lower classes enlisting (five), who had attended at least one term, namely, giving them standing as far as time was concerned for the whole year, but requiring that they work up the deficiencies in professional courses of their year with special assistance of the staff.

The degree was also conferred upon one member of the class of 1913-14, who had been conditioned, but had since enlisted.

It may be of historical interest to state that of the 89 names of regular students at one time registered in this Faculty since its organization nine years ago, graduates and undergraduates, not less than 60 per cent., as far as known, appear at present writing as enlisted for overseas service. In this connection, it may be also worth noting that word of the value of the course in First Aid inaugurated in this Faculty four years ago, came from the front, and that hence a repetition of this course was secured from the Faculty of Medicine.

No changes of any importance have taken place in the curriculum, but as foreshadowed in my last report, a slight increase in entrance requirements for the coming year was inaugurated, namely, raising the passing mark in English and Mathematics to 50 per cent. on each paper and 60 per cent. in each subject. This has been done with the hope of securing a better class of men. As explained in last year's report—and the difficulty has been accentuated during the year through enlistments of older graduates—the Dominion Forestry Branch finds not sufficient leadership developed among the graduates, and since much of the present forest work is crew work, it has been difficult to employ even undergraduates for summer work for lack of leaders. The only way in which the Faculty can meet this need appears in the increase of entrance requirements—indeed, the course should be a postgraduate one, or at least the six-year course, as at present scheduled, should become the general course for the professional man. Other difficulties in making the present course efficient are the lack of a permanently located practice camp and an undermanned staff. In this respect, I invite comparison with the most successful forest schools in the United States, which employ four to six instructors and that for 40 weeks, against our three fully engaged with only 25 weeks' session. The best schools also have a

permanent practice camp, which with the added time at disposal permits a superior development of the men in practical direction.

A re-organization after the war on these lines must be taken into consideration.

(5) Report of the Dean of the Faculty of Education (Dr. W. Pakenham).

The attendance in the regular courses for the Session 1915-16 (343) was slightly below that of 1914-15, the record year in attendance at the Faculty of Education. There was a small increase in the numbers of students with Faculty Entrance standing (226 in all), which was more than offset by the decrease among the graduates in arts (81 in all). This decrease affected seriously the number of specialists in attendance, which shrank to 26. Enlistments and the new requirements in the specialist courses in arts explain the situation.

In another direction, the courses for degrees in Pedagogy, the registration stands at 40. This registration of experienced High School teachers, Normal School instructors, and Public School Inspectors is a measure of the growing interest in graduate work in Education.

In the new one-year course for the Ordinary Certificate in Household Science, which was offered by the Faculty of Education through the Household Science department under an agreement with the Department of Education, the registration was 32. The course was successful and the registration will probably increase.

The problem of the woman student still presses for solution. No students in a state University have a larger claim upon the attention—and the revenues—of that University than those who will become teachers in higher school posts, and thus shape the morals and manners of the young people of the state. In the Faculty of Education there are 277 women students, the majority of whom are under 21 years of age and are strangers in the city. And yet there is no residence for women in the Faculty of Education, no woman superintendent, counsellor, or teacher.

Three members of the staff were absent throughout the session on leave. Captain Cline and Lieutenant Manning were in service at the front; Major Bramfitt was attached to the School of Instruction of the Division.

"The School," the educational journal published monthly by the staff, has just completed its fourth year. Its influence increases. It now goes to 4,800 schools and is probably read by twice as many teachers. Its success, despite the burdens imposed by the war, is due in large measure to the energy of the managing director, Mr. W. J. Dunlop.

A memorandum on the University Schools, by the Headmaster, is enclosed.

Memorandum on the University Schools by the Headmaster.

The enrolment in the University Schools for September, 1915, was at the maximum. The effect of the war upon attendance has, however, become evident during the year in the Senior School, where, for the first time in the history of the institution, the number dropping out during a session has been considerable. Most of these boys have themselves joined the colours; others have taken the places of older relatives who had enlisted; while others again have been obliged to withdraw through the financial stringency of war-time.

This school has now contributed three masters and about 150 former pupils to the country's service and has reason to be proud of its increasing honour roll. Captain George A. Cline, a master in the school, who was the first to respond to the call and who has been at the front from the beginning, was recently made a

Chevalier of the Legion of Honour by the French Government for distinguished services. Already, too, the roll of the gallant dead has included six from our numbers. The results of the appeals in behalf of the Red Cross and Patriotic Funds illustrated once again the spirit of generosity which has always been characteristic of the school. To these funds the boys contributed more than $400 in cash, while the subscriptions of the masters were extremely liberal.

The returns from the Matriculation examination of 1915 were highly encouraging as evidence that the spirit of honest work which the school inculcates is bearing fruit. In the Pass lists the failures were few, while 35 succeeded in obtaining complete Matriculation. The Registrar of the University characterized our record sheet as one of the best he had ever seen. The Honour list was equally good. Seventeen boys succeeded in obtaining among them 55 honours, of which 25 were first class. The school was fortunate in having among the aspirants for scholarships a student of such character and intellect as Andrew Robertson Gordon, who carried off the Prince of Wales' prize—the blue ribbon of scholarship for Ontario preparatory schools. His record at the scholarship examination will be difficult to surpass. Not only did he secure first-class honours in every subject and first place in the departments of Classics and Mathematics, but he also ranked first in general proficiency and in every combination of departments for which proficiency scholarships are awarded. Due credit must be given to the masters of the school for these successes.

In athletics the notable event of the year was the winning of the Junior Championship in the Ontario Rugby Football Union. Credit for this is largely due to the energy and coaching skill of Mr. J. O. Carlisle, classical master in the school. Thanks are also due to the Board of Governors for the grant which enabled the club to enjoy the use of Aura Lee athletic grounds, without which proper preparation could not have been made. It is noteworthy that a majority of the members of the championship team have since enlisted.

The winning of these Provincial prizes in both the scholastic and athletic arenas marks the year 1915 as the "annus mirabilis" in the history of the University Schools.

Three additions to the equipment of the school are worthy of special remark. The establishment of the cafeteria under the direction of Miss Elliott has proven a boon to the school. It has been extensively patronised by both masters and boys, and has received the warm commendation of parents. Through the generous support of parents of the boys in attendance at the University Schools, it has been possible to acquire for our own use a pathescope or moving picture lantern designed for schools. The systematic weekly exhibition of educational films has been found to add greatly to the interest of geography and history, and already the usefulness of the machine has amply justified its purchase. The "Daughters of the Empire," through their educational secretary, are presenting to the University Schools, as a part of the Faculty of Education, sixty British historical pictures as a permanent exhibit upon our walls. These are now arriving and being framed, and will within a few weeks be formally presented by the representatives of the I.O.D.E., Mrs. Gooderham, Mrs. Riddell, and Mrs. E. F. B. Johnston, on the occasion of our annual reception to parents. This splendid gift comes most opportunely, and is hereby gratefully acknowledged.

(6) Report of the Librarian (H. H. Langton, Esq., M.A.).

The number of volumes added to the Library during the year ending 30th June is 2,546, and the number of pamphlets 783, making total contents of Library, 144,482 bound volumes and 49,541 pamphlets.

Statistics of the use of the Library and books by students, as compared with those of the two previous year, show that the progress of the war has had a very decided effect upon the student body. They are as follows:

	1913-14	1914-15	1915-16
No. of day tickets	33,656	32,053	28,014
No. of books taken for the night	12,383	12,546	12,006
Average No. of readers at any one time	91	96	67

The purchase of books for the Library during the year was greater than for the previous year, but in some departments of science which have depended largely upon the books or periodicals published in Germany, the expenditure is necessarily far below normal. The British Government authorized the importation of books and periodicals of a scientific character, printed in Germany, for University Libraries and other scientific institutions, and orders were placed for this Library with an English agent for periodicals. Nothing, however, has been received. The difficulty of importation through a neutral country such as Holland has evidently not yet been overcome.

(7) Report on University Extension Work (Dr. A. H. Abbott).

Summer Session:

The University of Toronto in co-operation with the Department of Education held, in the summer of 1915, the usual Summer Session from July 6th to August 15th. Courses were offered in Normal and Faculty Entrance, Commercial Work, Household Science, Vocal Music and Manual Training with the addition of two new Courses in Auxiliary Classes and Kindergarten Primary work. The attendance was as follows:

Faculty Entrance	90
Normal Entrance	36
Commerce	30
Household Science	49
Music	40
Manual Training	9
Auxiliary Classes	19
Kindergarten Primary	80

The total attendance was three hundred and fifty-three (353), an increase of seventy (70) over the summer of 1914. One needs only to see this large body of teachers gathered from different parts of Ontario to be impressed with the great opportunity the Summer Session offers.

The Dining Hall, North House and East House, Queen's Hall, Nos. 7, 9 and 4, Wycliffe College and Burwash Hall were opened for the accommodation of Summer

Session students and Examiners of the Department of Education. The total number in Residence was three hundred and twenty-two (322).

Correspondence Courses:

To supplement the work of the Summer Session in Commerce, Normal and Faculty Entrance work Correspondence Courses are arranged. The subjects are outlined in seven monthly Bulletins with prescribed work to be sent in monthly or fortnightly. Eighty-eight (88) teachers (Faculty Entrance 61; Normal Entrance 23, Commerce 4) took advantage of these Courses during the term 1915-16. In Normal and Faculty Entrance Courses seven hundred and ninety-five (795) exercises were sent in for examination and criticism, almost twice the number sent from about the same number of students the previous year. The total number of exercises sent in was eight hundred and thirty-four (834). The fees received for correspondence work were eight hundred and forty-nine dollars and fifty cents ($849.50).

Teachers' Courses:

In the spring of 1916 a course leading to the degree of Bachelor of Arts was authorized by the University of Toronto for teachers and others who were unable to attend the regular Session. The First Year subjects were given conjointly with the Faculty Entrance Classes already provided for. Three subjects of the Second Year were offered for the Summer Session of 1916 namely: English, French and Physics. The teachers of Ontario were circularized regarding this Course with the result that there were thirty-one (31) applications for Second Year work. Further information regarding this Course will be found in the next report.

Local Lectures:

Many of the organizations which in previous years had requested lecturers from the University were occupied this year in carrying on recruiting and Red Cross meetings. It was fortunate the demand fell off in this way: with the number of the staff already at the front and those remaining overtaxed with work, it was difficult at times to find lecturers for the requests which did come in. A total of ninety-six (96) lectures were arranged, thirty-five (35) in Toronto for which fifty-five dollars ($55.00) in fees was received, and sixty-one throughout the Province for which one hundred and six dollars and forty cents ($106.40) was received in fees. The amount paid by the Board of Governors to the lecturers was three hundred and five dollars ($305.00). Nineteen of the above lectures were delivered before Canadian Clubs, others before Teachers' Institutes, Scientific Associations and other organizations.

(8) Statement Regarding the Biological Museum (Professor Bensley).

During the past year practically no changes have been made in the exhibition material of the Departmental Museum, the efforts of the staff having been directed towards the arrangement of the collections in the Royal Ontario Museum of Zoology.

The following donations have been received:

Eggs and young of Commercial Fishes and exhibit of hatchery apparatus, presented by the Department of Naval Service, Ottawa.

A mounted photograph of Deer killed by wolves, presented by Mr. G. W. Bartlett, Superintendent, Algonquin Park.

A Collection of thirty West Indian Hummingbirds, presented by Miss E. Roger, Toronto.

An egg of Corey's Bittern, presented by Mr. Geo. Pierce, Toronto.

A Lizard and Egyptian Scarabs, presented by Mr. A. A. Bolté, Toronto.

An Australian Pigeon, presented by Mr. J. H. Ames, Toronto.

Prepared jaws of Shark, presented by Mr. E. M. Bogert, Toronto.

A western Gopher, presented by Mr. W. G. Bligh, Toronto.

A valuable collection of Ontario Birds of Prey and Ducks, presented by Mr. Z. A. Lash.

A case of foreign Birds, presented by Mrs. Charles Moore, Toronto.

A young Emperor Boa, presented by Mr. F. E. Fleming, Toronto.

A large stump cut by Beavers, presented by Mr. G. L. Jerman, Bancroft, Ontario.

A large number of valuable specimens have been received from the Riverdale Zoological Gardens, through the courtesy of Mr. F. Goode, Superintendent. These include 1 European Swan, 1 American Swan, 1 Heron, 1 Golden Pheasant and 1 Peacock; 1 Monkey, 1 Baboon. 2 Red Foxes, 2 Camels, 1 Wapiti, 1 Llama, 1 Leopard, 1 Lion, 2 Syrian Bears, 1 Sun Bear, 1 Siberian Bear, 1 Canadian Black Bear, 2 Seals.

There has been received by purchase at a nominal figure a valuable collection of Insects comprising upwards of 3,000 specimens, from Mr. Henry S. Saunders, Toronto.

The following additional specimens have been received from Algonquin Park, through the arrangement previously made with the Provincial Government, viz., 1 Beaver, 1 Fisher, 2 Mink and 1 Shrew.

A considerable amount of new material collected on the Atlantic and Pacific coasts by Professor E. M. Walker, Dr. A. G. Huntsman and Mr. A. D. Robertson of the Departmental staff, has been incorporated in the collections.

(9) Statement Regarding the Geological Museum (Professor A. P. Coleman.)

During the year attention has been directed principally to the completion of printed labels for the specimens in the gallery: it is hoped that before the summer vacation this work will have been finished. A new wall case has been installed for the reception of a series of dressed blocks and hand samples of Canadian building stones. The alcoves have been provided with conspicuous signs indicating the object to which each is devoted.

Owing to the war and the financial stringency no money has been expended on the purchase of new material. It is hoped that the grant which thus has been allowed to revert will be restored to the museum when economic conditions are more favourable.

The more important acquisitions are as follows:

By Donation:

Pedestal of marble.—Alabama Marble Co., Gantt's Quarry, Alabama.

Blue corundum in nepheline syenite, Madawaska River, Ontario.—Consumers' Corundum Co., per Professor Haultain.

Set of copper-lead ores, Blue Bell mine, Kootenay, B.C.—Professor T. L. Walker.

Set of zinc ores, H. B. Mine, Salmo, B.C.—Professor T. L. Walker.

Sets of copper ores, Iron Mask and Eureka mines, B.C.—Professor T. L. Walker.

Large samples of British Columbia coals.—Provincial Museum, per Dr. R. B. Orr.

Miscellaneous collection.—Gowinlock estate, Toronto.

By Collection:

Building stones, rocks, coals from Saskatchewan and Alberta.—Professor W. A. Parks.

By Purchase:

Large slabs of Potsdam sandstone showing shrinkage cracks.

(10) Statement Regarding the Palæontological Museum (Professor W. A. Parks.)

During the year a beginning has been made in the installation of a series of wall cases on the east side of the long partition in the gallery. This series will contain a representative set of specimens illustrating the geology and palæontology of Canada. Two sections were installed and supplied with specimens illustrating the Pre-Cambrian and Ordovician formations. It is hoped that this series will be of especial value to students. In order to provide these cases it was found that the grant for the purchase of material had to be drawn upon; in consequence no money has been expended for the purchase of new specimens.

Considerable time was spent in the preparation of printed labels for the high cases and this work is now practically completed. The chief acquisitions during the year were as follows:

By Donation:

Large series of general specimens.—Department of Zoology, per Professor Bensley.

Trenton limestone and fossils, Myrtle, Ont.—Charles Armstrong, Esq.

Concretion from White River, Ontario.—Edward Barrett, Esq.

Fine specimen of *Dictyonema crassibasale*.—Mrs. C. C. Grant, Hamilton.

Specimen of *Baculites ovatus*, Battleford, Sask.—R. Tutt, Esq., per Dr. T. L. Walker.

Fossil coral from Baffin Land.—Rev. Mr. Fleming, per Mr. C. T. Currelly.

By Collection:

Mesozoic and Tertiary fossils from Alberta.—Professor W. A. Parks.

By Purchase:

Fine specimen of *Climatichnites wilsoni*.—Mr. A. M. Campbell, Ottawa.

(11) Statement Regarding the Mineralogical Museum (Professor T. L. Walker.)

The collections of the University and of the Royal Ontario Museum of Mineralogy have been enlarged during the year by donations and exchanges. The following lists contain the names of our chief benefactors:

By Exchange.

Bayley, Prof. W. S., University of Illinois, Urbana, Ill., U.S.A.
Geological Survey of Canada.
Smyth, Prof. C. H., jr., Princeton University, Princeton, N.J.
Watkin-Brown, W. T., Sydney, N.S.W.

By Donation.

Benner, W. W., Pt. Arthur.
Bennett, H. C., Nelson, B.C.
Campbell, A. D., O'Brien Mine, Cobalt.
Cole, A. T., Grafton, Ont.
Coleman, Dr. A. P., University of Toronto.
Collins, Dr. W. H., Geological Survey of Canada, Ottawa.
Crow's Nest Pass Coal Co., Fernie, B.C.
Dominion Coal Co., Glace Bay, N.S.
Douglas, Dr. James, New York City, N.Y.
Ellsworth, Dr. H. V., University of Toronto.
Emmens, N. W., Mgr. Monarch Mine, Field, B.C.
Flaherty, R. J., Toronto.
Guess, Prof. G. A., University of Toronto.
Hamil, C. B., Blenheim, Ont.
Haultain, Prof. H. E. T., University of Toronto.
Irwin, G. E., Salmo, B.C. (H. B. Mine).
Keffer, F., Ashcroft, B.C.
Lodge, Matthew, Moncton, N.B.
Maclean, A., University of Toronto.
Mond Nickel Co., Coniston, Ont.
Neilly, B., Mgr., Penn-Canadian Mines, Cobalt.
Orr., F. O., Peterboro'.
O'Flynn, W. A., Mond Nickel Co., Coniston, Ont.
Parks, Dr. W. A., Royal Ontario Museum of Palæontology.
Parsons, Prof. A. L., University of Toronto.
Stitt, J. B., Braden Copper Co., Rancagua, Chili, South America.
Thomson, J. E., University of Toronto.
Wickett, J. W., Redruth, Cornwall, England.
Widdowson, E. W., Nelson, B.C.
Workman, G. E., Toronto.
Wylie, W. H., Hollinger Mine, Timmins, Ontario.
Young, W., Toronto.

(12) Report of the Medical Research Committee for Year 1915-16.

The work of the Medical Research Fund, like all the other activities of the University, has suffered considerable disorganization as a result of the war. Four Fellows, Doctors Caulfeild, Armour, Sharpe and Fletcher, are at present abroad on active service, and have had their researches interrupted before they were well begun. Two others, Drs. Fletcher McPhedran and Annie Homer, have resigned upon the completion of the work on which they were engaged. To balance these losses only two new Fellows, Drs. Detweiler and Bruce Macullum, have been appointed. Apart from these two, the only appointee now acting under the Fund is Dr. Goldie; and it should be noted that, although Dr. Goldie continues to act as Director of the Medical Clinic, he does so now, at his own request, without salary.

In spite of these unfavourable circumstances the work accomplished during the year 1915-16 is neither inconsiderable nor unimportant. *Dr. Fletcher McPhedran* continued until September, 1915, the date of his resignation, a series of observations on the reaction of the blood in nephritic dyspnoea; these observations, together with others obtained subsequently to his resignation, will be published shortly. *Dr. Annie Homer,* who acted as Fellow until December, 1915, continued her important work upon the metabolism of tryptophane; in connection therewith she elaborated a new and useful method for the determination of the tryptophane content of proteins, and made a careful and thorough examination of the colour reactions of the urine after the administration of indol derivatives. The results of Miss Homer's work appear in five papers, named below, which are to be followed presently by others. *Dr. Bruce Macallum*, who was appointed Fellow in July, 1915, has been engaged in a study of the substance or substances responsible for growth; this study promises results important not merely from the theoretical, but also from the clinical and even the economic point of view; one paper has already been published, and further reports may be expected in the near future. *Dr. Detweiler,* whose appointment dates from June, 1915, has been carrying on experimental work with a virulent streptococci in an effort to establish their etiological relationship to endocarditis; in a paper which will appear at an early date, he will publish evidence demonstrating that organisms isolated from the blood of patients with chronic infectious endocarditis are capable of producing in rabbits lesions identical with those of the human disease. *Dr. Goldie* reports that he is engaged upon a study of pleural effusions, and that under his direction investigations are being conducted in the Out-Patient Department by Dr. Oille on acute endocarditis, by Dr. Rolph on hyperchlorhydria, by Dr. Minns on tuberculous infections in children, and by Dr. Solway on asthma; in addition a new clinic has been established for the treatment of syphilis with the idea of securing data as to the prevalence of the disease and the efficiency of treatment.

The following papers, published since June, 1915, contain work performed wholly or in part by Medical Research Fellows, or under their direction:

Almon Fletcher: "Some Considerations in the Study of Infantile Tetany, with Report of a Case." Arch. Int. Med., *16*, p. 382, Sept. 1915.

Alan Brown and Almon Fletcher: "The Etiology of Tetany-Metabolic and Clinical Studies." Amer. Journ. Dis. of Children, *10*, p. 313, Nov. 1915.

Annie Homer: "A Spectroscopic Examination of the Colour Reactions of Certain Indol Derivatives and of the Urine of Dogs after their administration." Journ. Biol. Chem. *22*, p. 345, Sept. 1915.

Annie Homer: "A Method for the Estimation of the Tryptophane Content of Proteins, Involving the Use of Baryta as a Hydrolyzing Agent." Journ. Biol. Chem., *22*, p. 369, September 1915.

Annie Homer: "The Relation Between the Administration of Tryptophane to Dogs and The Elimination of Kynurenic Acid in Their Urine." Journ. Biol. Chem. *22*, p. 391, September 1915.

Annie Homer: "A note on the effect of iron salts on the metabolism of tryptophane in the dog." (Journal Physiology, Vol. L., March, 1916.)

Annie Homer: "A note on the action of tissue enzymes on tryptophane." (Journal Physiology, Vol. L., March, 1916.)

C. Funk and A. Bruce Macallum: "Studies of Growth *11*. On the Probable Nature of the Substance Promoting Growth in Young Animals." Journ. Bio Chem., *23*, p. 413, Dec. 1915.

To these there ought to be added papers by Dr. Goldie and the members of the hospital staff working under his direction. A list of these has been promised by Dr. Goldie and will be furnished as soon as it is received.

(13) Report of the Director of the Antitoxin Laboratory (Dr. J. G. Fitzgerald.)

The work of this laboratory has just entered upon its third year. Very considerable progress has been made since the first report was prepared.

On February 1st, 1916, the Provincial Board of Health of Ontario began the free distribution of public health biological products in the Province of Ontario. These products include diphtheria and tetanus antitoxin, anti-meningitis serum, smallpox vaccine, the pasteur treatment and anti-typhoid vaccine. (All but the last named are supplied by this laboratory.) This movement on the part of the Provincial Board of Health has received the very warmest commendation and has enabled the Antitoxin Laboratory to take a very real and active part in public health work in the Province of Ontario.

The very close relationship of the Department of Hygiene and the Provincial Board of Health of Ontario, initiated by Major Amyot, has in this way been further strengthened. Mutual advantages from the points of view of research, teaching and public health endeavour are hopefully anticipated.

The distribution of public health products has also continued in Newfoundland, Nova Scotia, New Brunswick, Quebec, Manitoba, Saskatchewan and Alberta.

The laboratory has continued to supply all the biological products required by the Department of Militia and Defence for the Canadian Expeditionary Force. Thanks to the splendid work of Dr. R. D. Defries and his assistants large quantities of tetanus antitoxin have been produced and supplied for the past eight months. At present all the tetanus antitoxin used by the Canadian Expeditionary Force, overseas and in Canada, is prepared in this laboratory under the direction of Dr. Defries.

At the present time the scope of the work of the laboratory is expanding considerably, in addition to the antitoxins and vaccines already being produced, anti-meningitis serum is being prepared and vaccine virus is to be started as soon as the necessary accommodation is provided.

Through the fine generosity of Colonel Albert E. Gooderham, the laboratory is soon to have a permanent home for the necessary laboratory animals. A farm of about fifty acres has been purchased by Colonel Gooderham and deeded to the University. On this property a laboratory and model stables and a cottage are being erected. The stables include living quarters for employees, an operating room, preparation room and all the necessary features to insure the ideal conditions under which biological products should be produced. It is expected that within a few months the new quarters will be completed and ready for occupancy.

This property will provide facilities for the antitoxin laboratory similar to those provided at Garche, for the Pasteur Institute in Paris and at Elstree, for the Lister Institute in London. This laboratory and the Province of Ontario is under a debt of obligation to Colonel Gooderham for his magnificent gift.

The very warm support of the laboratory accorded by Major J. W. S. McCullough, Chief Officer of Health, is hereby gratefully acknowledged. This has been especially welcome because of the continued absence in France of the Head of the Department of Hygiene, Major Amyot, O.C. Sanitary Section, First Canadian Division.

The staff of the Antitoxin Laboratory has continued to increase in numbers, and to all of them the Director is indebted for their loyal and much appreciated co-operation.

(14) Report of the Director of the Department of Social Service (Dr. Franklin Johnson.)

General.

The department has had a successful year of work in the different branches of its field. Further details will appear under the following heads.

By the way of summary, it will be said here that the number of students has been larger than expected, the field work has been improved and strengthened, the courses of instruction have been well conducted and successful, the commencement of a library has enabled better study on the part of the students, the office system and records has proved satisfactory, fees have been larger than anticipated owing to the number of students, and the establishment of the department in the new building has enabled work of far higher quality than before, and has made possible the welding of the work into a homogeneous unit.

Two especially interesting events of the year have been the action of the city in requiring that all playground supervisors and assistants employed by it must have the course of training on playground work in this department, and the establishment by the Toronto General Hospital of a scholarship for its best student in our Medical Social Service Course, to consist of the fees and living expenses while in attendance in the Department of Social Service.

Building.

The building has proved well adapted for the work and its situation is very accessible. The lecture-room facilities furnished by the building have all been required by the needs of the work. One class has been too large for the larger lecture-room, and to accommodate it we have been compelled to use a lecture-room in the Mining Building, which has proved a convenient and satisfactory arrangement. The office and library accommodation has also proved very suitable. The library and reading-room facilities have been completely used on most days.

The building is beginning to be recognized as a centre for the social interests and activities of the city, and they are gradually gathering around this department as a focus. A number of important meetings of city organizations have been held here during the year. This tends to increase the influence and contact of the University with city activities and is to be desired.

The most important feature of the building is its effect upon the work of the Department. This cannot be over-estimated. It has really created the Department, and has enabled it to do work of a grade which would otherwise have been impossible.

The Director.

In addition to work directly involved in the administration of the Department, there has also been a large amount of outside work placed upon the Director. While avoiding controversial activities in the city, he has been obliged to be active in many organizations. The Director's office has become a source of information for many city activities whose members come there seeking advice and recommendations. In addition to this he has been obliged to deliver a large number of addresses practically every week throughout the year.

Courses of Instruction.

The general plan of courses has proved satisfactory as a whole. There have been some slight changes this year, and a few more slight changes will be advisable for next year. The plan in general has shown itself sufficient for the work with its present scope.

Several new courses have been added this year, including a course for Playground Supervisors, conducted by the Director and attended by the Playground Supervisors of the city playgrounds, a discussion course in Child Welfare conducted by Miss Hart, and a course on Games and Recreation conducted by Miss Carson.

There has been improvement in almost every course. Detailed comment on the courses is not in place here, but mention may be made of the course on Community Work under Miss Carson, which has been broadened and enlarged; the course on Social Psychology, which under Dr. Abbott and Dr. Hincks has been changed and improved; and the course on Child Welfare, which under Miss Hart has been developed into a strong and satisfactory course, covering well that important field. Special mention of these courses is not meant to detract from the other courses.

Field Work.

The problem of suitable field work has been totally different from that of last year. The changed situation in the city as regards unemployment, charitable relief and social distress in general, has very largely altered the field work arrangements of the preceding year and necessitated in a large measure a complete change and replanning.

It has proved possible, however, to successfully develop field work, and to provide it for the enlarged number of students whom the Department had this year.

Library.

The library is commencing to be of real service to the students. A few carefully selected books have been purchased, and other books have been donated to the library through the kindness of interested people outside.

The Library also has commenced making a collection which should prove of the utmost value, of the reports and publications of the leading institutions and organizations in the different branches of social work in the United States, and as far as possible those of all the social activities issuing reports in the Dominion. Such reports are of great importance and constitute an indispensable part of the working material of the libraries giving special attention to the social field. Our own library should be shortly well equipped in this regard, since most of these reports are comparatively inexpensive.

Students.

The department has enrolled this year 274 students, as compared with 293 last year, a most satisfactory attendance in view of the fact that the staffs of certain organizations completed their work the year before. The number of full-time students has been increased. Last year nine students received the certificate. This year seventeen students were granted the certificate, with a total enrolment of twenty-two full-time students.

The quality of the students is markedly high. Last year comment was also made as to this, but the present year's class of full-time students is still better in education, ability and general qualifications, excellent as was the class of last year.

(15) Report of the Physical Director (Dr. J. W. Barton).

As there was no intercollegiate competition of any kind last year interfaculty contests in the various branches of sport engaged a great number of students.

In Rugby twelve teams competed for the Mulock Cup, perhaps the most exciting series of years. Jr. S.P.S. won from Victoria in the finals.

In soccer eight teams were entered, the Dental team finally winning from Knox.

The track meet was held as usual with a goodly number of competitors, but very few spectators. The elimination of the old time "scrap" from the track meet, while seriously depleting the attendance, has dignified the sport. The O.A.C. brought down their usual number of entrants and were fortunate to win the trophy. No records were broken.

The Brotherton Cup race for cross-country running had four teams entered. St. Michael's College came in for the first time and won the race from the old time winners, Trinity College.

The Tennis Tournament was unusually successful because of the able handling by the executive. University College won the interfaculty competition.

The swimming competition was below the usual standard. Medicals won the Eckhardt Cup.

The assault-at-arms saw nearly every weight contested, but the total number entered was the lowest in our history. The quality of the work, however, was better than above the average. The Davidson Cup for the greatest number of points was won by University College.

All the games in the Sifton Cup Basket Ball series were played on the Central Y.M.C.A. floor, as our own floor in the temporary gymnasium is too small. Twelve teams entered and great interest was maintained throughout the whole series. Junior Victoria College won the final.

The Jennings Cup Hockey series had twelve teams entered, the Junior Dentals finally winning.

The indoor work and gymnasium classes were very poorly attended. Drill three times a week took away all desire for exercise from those not engaged in athletics.

The new building is nearing completion, but the great amount of detail required for the interior fittings makes progress slow.

Gymnasium Report.—Women's Department (Miss Ivy Coventry, Instructor.)

Total No. of women students enrolled in Gymnasium and Swimming Classes	233
Total No. enrolled in Gymnasium Classes	188
Total No. attending 1st Year Physical Training Classes	128
Total No. attending 2nd Year Physical Training Classes	60
Average attendance at each Class	40
No. of Gymnasium Classes per week	10
Total No. of Gymnasium Classes from October to April, 1916	209

There were 128 students attending the 1st Year Physical Training Classes aiming for credit.

Records of attendance and class standing are filed.

There were sixty (60) students in the 2nd Year Class aiming for credit and the written statement promised by the University to those completing the two years' course in physical training. Including instruction in theory and practical work in the gymnasium, and swimming, there was 60 per cent. of attendance at classes and the final examination test. At the end of March 34 students of the 2nd Year Class completed the final practical test and passed the examination successfully.

Fifty-six of the 1st Year Class completed the test and passed successfully.

Thirteen students of the 2nd Year Class tried and passed the final swimming test.

There was a separate gymnasium class of Household Science students—composed of teachers who held the professional certificate granted by the Department of Education. It was compulsory for these students to devote one period (1 hour) per week to physical training.

Total No. enrolled in this class	30
Average attendance	30
Total No. of classes taught	20

A gymnasium exhibition of class-work and special drills was given in the Women's Gymnasium on Thursday evening, February 24, 1916, in connection with the Women's Athletic Association. This affair required extra time and practice. An expression of appreciation from the President of the Association to the class members was gratifying and encouraging.

All members of the gymnasium and swimming classes have shown marked enthusiasm and faithfulness in the Department of Physical Education.

(16) Report of the Superintendent of the Dining Hall (Miss V. M. Ryley.)

In submitting my report for the academic year 1915-16, I am glad to state that the year has been as successful as could be expected under war conditions.

During the month of October the Dining Hall served from 1,100 to 1,150 meals per day, but when Knox College Dining Hall was opened our numbers were reduced to an average of about 1,000 meals per day. As the year proceeded, group after group of the regular Dining Hall attendants, many of them students who have taken their meals here for several years, left either for England or training camps in Canada, until, when the Dining Hall closed, it was serving regularly only about 700 meals per day, which is less than at any time in the last five years. I am sure this result is something to be proud of rather than to be deplored. The total number of meals served was 178,729, or about 50,000 less than last year.

The year has been an exceedingly difficult one from a service standpoint. At times it was almost impossible to secure competent help, even though much higher wages were paid than formerly. Fully 12 or 15 of my best waiters and kitchen men have enlisted, and I am facing next year with the problem of securing both a new head waiter and a new meat cook, one having enlisted and the other having accepted a position at half as much more than the University can afford to give. Both of these men have been with me three years and their places will be hard to fill. Waiters were so scarce that the President has considerately allowed me to use waitresses in the Men's Dining Hall, whenever necessary, until the conclusion of the war.

APPENDIX B.

(1) Enrolment in the Colleges.
(2) Enrolment in University Subjects.
(3) Registration in Courses in the Faculty of Arts.
(4) Registration of Women Students.
(5) Registration for Graduate Courses.

(1) Enrolment in the Colleges.

The students in University College were enrolled as follows:

——	Greek.	Latin.	Ancient History.	English.	German.	French.	Orientals.	Ethics.
First Year—								
Pass	8	203	145	183	64	81	7	.....
Honours	9	28	30	76	40	60	.....	.....
Second Year—								
Pass	9	88	5	168	69	104	12	.....
Honours	10	10	15	55	35	38	.....	.....
Third Year—								
Pass	5	10	13	104	21	50	1	46
Honours	9	9	9	40	28	26	.....	.....
Fourth Year—								
Pass	1	4	13	58	22	35	2	22
Honours	6	6	3	27	12	13	.....	.....
Totals—								
Pass	23	305	176	513	176	270	22	68
Honours	34	53	57	198	115	137	.....	.....

The students in Victoria College were enrolled as follows:

——	Greek.	Latin.	Ancient History.	English.	German.	French.	Orientals.	Ethics.
First Year—								
Pass	3	77	59	67	10	42	27	.....
Honours	11	26	22	38	30	44	.....	.....
Second Year—								
Pass	6	35	.....	78	18	46	16	.....
Honours	4	5	11	13	18	18	.....	11
Third Year—								
Pass	1	6	6	74	10	25	8	30
Honours	7	5	5	12	10	8	1	6
Fourth Year—								
Pass	2	5	6	68	6	20	6	19
Honours	3	3	2	12	8	7	4	3
Totals—								
Pass	12	123	71	287	44	131	57	49
Honours	25	39	40	75	66	77	5	20

The students in Trinity College were enrolled as follows:

—	Greek.	Latin.	Ancient History.	English.	German.	French.	Orientals.	Ethics.
First Year—								
Pass	5	18	8	15	6	13	4	.....
Honours	3	8	6	10	6	9	.....	.....
Second Year—								
Pass	1	10	.....	11	6	10	1	.....
Honours	1	1	2	9	5	7	.....	.....
Third Year—								
Pass	.....	3	3	11	5	10	1	3
Honours	3	3	2	3	2	2	.....	.....
Fourth Year—								
Pass	.....	.....	3	14	5	9	2	4
Honours	.....	.....	.....	4	4	3	.....	2
Totals—								
Pass	6	31	12	51	22	42	8	7
Honours	7	12	12	26	17	21	.....	2

The students in St. Michael's College were enrolled as follows:

—	Greek.	Latin.	Ancient History.	English.	German.	French.	Philosophy.	Ethics.
First Year—								
Pass	12	58	4	61	34	51	.....	.....
Honours	4	5	4	5	4	5	.....	.....
Second Year—								
Pass	7	22	.....	23	10	21	.....	.....
Honours	1	1	1	3	3	3	.....	.....
Third Year—								
Pass	4	6	.....	28	8	19	12	22
Honours	.....	.....	.....	2	2	1	6	6
Fourth Year—								
Pass	1	.....	.....	14	5	7	2	9
Honours	.....	.....	.....	3	3	3	7	7
Totals—								
Pass	24	80	4	126	57	98	14	31
Honours	5	6	5	13	12	12	13	13

(2) Enrolment in University Subjects.

The following tables exhibit the numbers attending lectures in University subjects, together with the numbers of those taking the practical work in the laboratories:

DEPARTMENT OF MATHEMATICS.

—	Pass.	Pass and Honours.	Honours.
Faculty of Arts—			
First Year	250	.....	57
Second Year	.....	.....	65
Third Year	.....	.....	25
Fourth Year	9	.....	14
Faculty of Applied Science—			
First Year	.....	101	.....
Second Year	.....	86	.....
Total	259	187	161

DEPARTMENT OF PHYSICS.

—	Pass.	Pass and Honours.	Honours.	Laboratory.
Faculty of Arts—				
First Year	88	.....	92	176
Second Year	43	.....	53	61
Third Year	3	.....	27	30
Fourth Year	3	.....	27	14
Graduate Students	.....	.....	11	11
Faculty of Medicine—				
First Year	.....	125	.....	125
Faculty of Forestry—				
First Year	1	.....	.....	1
Faculty of Household Science—				
First Year	41	.....	.....	41
Total	179	125	210	459

DEPARTMENT OF BIOLOGY.

——	Pass.	Pass and Honours.	Honours.	Laboratory.
Faculty of Arts—				
First Year	171	.....	50	203
Second Year	36	.....	21	57
Third Year	.....	.....	11	11
Fourth Year	.....	.....	7	7
Graduate Students	.....	.....	.....	4
Faculty of Medicine—				
First Year	.....	125	.....	125
Second Year	.....	91	.....	91
Faculty of Applied Science—				
First Year	.....	8	.....	8
Second Year	.....	2	.....	2
Fourth Year	.....	10	.....	10
Faculty of Forestry—				
First Year	.....	.....	.....	.....
Second Year	.....	.....	.....	.....
Third Year	.....	7	.....	7
Fourth Year	.....	4	.....	4
Ontario Veterinary College Students in Botany	.....	.....	.....	58
Total	207	247	89	587

DEPARTMENT OF CHEMISTRY.

——	Pass.	Pass and Honours.	Honours.	Laboratory.
Faculty of Arts—				
First Year	40	.....	96	136
Second Year	103	.....	26	26
Third Year	24	.....	7	12
Fourth Year	3	.....	17	8
Occasional Students	2	.....	.....	2
Graduate Students	.....	.....	.....	6
Faculty of Medicine—				
First Year	.....	125	.....	125
Faculty of Applied Science—				
Third Year	.....	4	.....	.....
Faculty of Forestry—				
First Year	.....	1	.....	1
Second Year	.....	12	.....	1
Ontario Veterinary College Students	61	.....	.....	61
Total	233	142	146	378

DEPARTMENT OF PHYSIOLOGY AND BIOCHEMISTRY.

—	Pass and Honours	Honours.	Laboratory.
Faculty of Arts—			
Second Year	21	1	21
Third Year	70	31	70
Fourth Year	35	35	35
Fourth Year (Food Chemistry)	32	20	32
Occasional Students (Food Chemistry)	31	31	31
Faculty of Medicine—			
Second Year	91	.....	91
Third Year	93	.....	93
Veterinary Students	51	.....	51
Total	424	118	424

DEPARTMENT OF GEOLOGY.

—	Pass.	Pass and Honours	Honours.	Laboratory.
Faculty of Arts—				
Second Year	105	.....	20	115
Third Year	6	.....	5	2
Faculty of Applied Science—				
Second Year	.....	6	.....	.....
Third Year	.....	50	.....	6
Fourth Year	.....	32	.....	1
Faculty of Forestry—				
Second Year	.....	11	.....	11
Third Year	.....	6	.....	.....
Total	111	105	25	144

DEPARTMENT OF MINERALOGY.

——	Pass.	Pass and Honours.	Honours.	Laboratory.
Faculty of Arts—				
Second Year	93	.....	14	107
Third Year	5	.....	9	14
Fourth Year	.....	.....	9	4
Graduate Students	.....	.....	2	2
Faculty of Applied Science—				
First Year	.....	11	.....	11
Second Year	.....	50	.....	48
Third Year	.....	9	.....	9
Fourth Year	.....	1	.....	1
Faculty of Forestry—				
Second Year	.....	11	.....	11
Third Year	.....	6	.....	6
Fourth Year	.....	.....	.....	1
Total	98	88	34	214

DEPARTMENT OF PHILOSOPHY.

——	History of Philosophy and Metaphysics.		Psychology.	Logic.	Ethics.	
	Pass.	Honours.	Honours.	Honours.	Pass.	Honours.
Second Year	.....	28	39*	28	.....	15
Third Year	68	12	13	12	54	12
Fourth Year	38	8	8		36	8
Graduate Students	.....	8	12	4	.....	4
Total	106	56	72	52	90	39

*11 occasional.

DEPARTMENT OF POLITICAL SCIENCE.

	Pass.	Honours.
Faculty of Arts—		
Department of Political Science—		
First Year	.....	27
Second Year	29	29
Third Year	78	16
Fourth Year	80	16
Graduate Students	.....	11
Department of Commerce and Finance—		
First Year	.....	12
Second Year	.....	3
Third Year	.....	6
Fourth Year	.....	6
Department of Modern History—		
Second Year	.....	6
Third Year	.....	2
Fourth Year	.....	2
Department of Philosophy—		
Third Year	12	.....
Department of Household Science	9	.....
Faculty of Forestry	2	.....
Occasional Students	3	.....
Totals	213	136

DEPARTMENT OF HISTORY.

	Pass.	Honours.
First Year	.....	60
Second Year	153	70
Third Year	168	38
Fourth Year	130	44
Total	451	212

DEPARTMENT OF ITALIAN AND SPANISH.

	Italian.		Spanish.		Phonetics.
	Pass.	Honours.	Pass.	Honours.	Honours.
First Year	15	49	16	10	.....
Second Year	23	27	2	.....	34
Third Year	2	15	2	6	.....
Fourth Year	3	8	2	1	.....
Graduate Students	.....	1	.....	2	.....
Total	43	100	22	19	34

DEPARTMENT OF HOUSEHOLD SCIENCE.

	General Course.	Household Science Course.	Total.
Faculty of Arts—			
First Year	.....	36	36
Second Year	.....	23	23
Third Year	24	31	55
Fourth Year	16	20	36
Faculty of Household Science—			
Occasional Students	.....	.....	26
Faculty of Education—			
Household Science Course	.....	.....	31
General Course	.....	.....	206
Summer Session	.....	.....	49
	40	110	462

(3) Registration in Courses in the Faculty of Arts, 1915–1916.

Courses.	First Year.				Second Year.				Third Year.				Fourth Year.				Total.
	U.C.	V.C.	T.C.	St.M.C.	U.C.	V.C.	T.C.	St.M.C.	U.C.	V.C.	T.C.	St.M.C.	U.C.	V.C.	T.C.	St.M.C.	
General Course	142	45	15	55	73	35	7	21	61	44	7	22	71	32	11	7	648
General Course (Household Science)	18	19	1	.....	11	10	1	.....	10	5	.....	.....	.....	.....	.....	.....	75
Classics	8	5	2	2	4	3	.....	1	6	6	2	.....	5	2	.....	.....	46
English and History (Classics)	6	6	1	2	5	1	1	.....	3	3	1	.....	5	2	.....	.....	36
Greek and Hebrew	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Orientals	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	4	1	.....	7
Moderns	28	14	.....	3	25	8	1	3	19	9	1	1	17	7	2	2	140
Eng. and Hist. (Moderns)	19	12	3	.....	12	7	5	.....	8	1	2	1	11	3	.....	1	85
Modern History	12	3	1	1	3	2	1	.....	.....	2	.....	.....	2	1	1	.....	29
Political Science	18	7	2	1	24	7	1	.....	12	5	.....	.....	10	7	1	.....	95
Commerce and Finance	9	5	.....	.....	3	.....	1	.....	4	3	.....	.....	1	6	.....	.....	32
Philosophy	.....	.....	.....	.....	15	12	1	.....	6	7	.....	7	6	3	2	7	66
Mathematics and Physics	29	11	1	.....	15	8	1	.....	15	6	.....	.....	17	1	.....	.....	104
Natural and Physical Sciences	26	17	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
Physics	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1	1	.....	.....	4
Biology	.....	.....	.....	.....	6	.....	.....	.....	1	1	.....	.....	2	2	.....	.....	12
Geology and Mineralogy	.....	.....	.....	.....	1	.....	.....	.....	2	1	.....	.....	3	.....	.....	.....	7
Chemistry and Mineralogy I.	.....	.....	.....	.....	9	1	1	.....	3	.....	.....	.....	.....	2	.....	.....	16
Chemistry and Mineralogy II.	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	1	.....	.....	3
Biological and Phys. Sciences	.....	.....	.....	.....	1	.....	.....	.....	3	2	.....	.....	1	1	.....	.....	8
Physiological and Biochem. Scs.	.....	.....	.....	.....	5	2	.....	1	2	2	.....	.....	10	2	.....	.....	24
Household Science	.....	.....	.....	.....	.....	1	.....	.....	8	4	4	.....	10	8	.....	.....	35
Physiology and Household Scs.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2
Arts and Forestry	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	3
Chemistry	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Anatomy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total of courses taken	316	144	33	64	214	97	21	26	166	103	17	31	174	87	18	17	1,528
Total of students registered	302	139	33	64	210	96	21	26	166	103	17	31	174	87	18	17	

(4) Registration of Women Students.

The women students registered in University College took the following courses:

Courses.	First Year.	Second Year.	Third Year.	Fourth Year.
General	36	36	24	32
Classics	2	1	4	1
English and History (Moderns)	17	14	8	12
English and History (Classics)	3	2	2	3
Moderns	22	19	17	18
Modern History	4	1	.....	.....
Mathematics and Physics	6	3	3	4
Household Science	3	.....	13	10
Household Science (General)	19	10	10	.....
Science	6	.....	.....	.....
Biological and Physical Sciences	.....	2	.....	.....
Biology	.....	3	1	.....
Geology and Mineralogy	.....	.....	1	.....
Physiological and Biochemical Sciences	.....	.....	1	1
Totals	118	91	84	81

The women students registered in Victoria College took the following courses:

Courses.	First Year.	Second Year.	Third Year.	Fourth Year.
General	11	18	16	12
Moderns and English and History	18	9	7	6
Classics and English and History	7	1	.....	2
Modern History	3	.....	.....	1
Mathematics and Physics	3	.....	.....	1
Natural and Physical Sciences	7	.....	1	2
Household Science	.....	1	4	.....
Household Science (General)	18	10	5	10
Philosophy	.....	1	.....	.....
Totals	67	40	33	34

The women students registered in Trinity College took the following courses:

Courses.	First Year.	Second Year.	Third Year.	Fourth Year.
General	9	6	3	3
Modern Languages	.....	1	.....	3
English and History (Moderns)	3	4	2	.....
English and History (Classics)	1	.....	1	.....
Modern History	.....	.....	.....	1
Classics	.....	.....	1	.....
Philosophy	.....	.....	.....	1
Household Science	6	.....	4	.....
Mathematics and Physics	1	1	.....	.....
Totals	20	12	11	8

The women students registered in St. Michael's College took the following courses:

Courses.	First Year.	Second Year.	Third Year.	Fourth Year.
General	18	7	8	3
Modern Languages	2	3	.....	2
English and History (Moderns)	1	.....	1	1
Classics	2	.....	.....	.....
Totals	23	10	9	6

The women in the Faculty of Medicine were enrolled as follows:

First Year	8
Second Year	11
Third Year	7
Fourth Year	5
Fifth Year	5
	36

The women in the Faculty of Household Science took the following courses:

Department of Education	31
Occasional students	26
	57

The women in the Faculty of Education took the following courses:

Advanced Course	4
General Course	232
Household Science	31
	277

(5) Registration for Graduate Courses.

	M.A.	Ph.D.
Department of Classics	7	....
" Oriental Languages	5	1
" English	3	1
" French	2	1
" Italian and Spanish	1	1
" History	13	....
" Political Science	7	1
" Philosophy	15	7
" Mathematics	4	1
" Physics	5	5
" Chemistry	6	6
" Mineralogy	.....	2
" Biochemistry	2	....
" Physiology	1	....
" Botany	1	3
" Astro-Physics	1	....
Total	73	29

APPENDIX C.

Results of Examinations.

(1) Faculty of Arts.
(2) Faculty of Medicine.
(3) Faculty of Applied Science.
(4) Faculty of Forestry.
(5) Faculty of Education.

RESULTS OF EXAMINATIONS IN APRIL, 1916.

(1) Faculty of Arts.

Senior Matriculation.

Courses.	University.	Univ. Coll.	Vic. Coll.	Trin. Coll.	St. M. Coll.	Totals.	Passed.	Granted standing on account of Mil. Service.	Starred.	Failed.	Transfer'd.	Aegrotat.	Deferred.	Debarred.
General	....	28	19	5	38	90	27	11	40	12	....	....	....	44
Supplementals	....	3	5	....	2	10	5	1	4	....	....	....	....	....
Gen. Course (House. Sc.)	....	2	6	....	....	8	2	....	3	3	....	....	....	....
Classics	....	....	....	....	1	1	1	....	....	....	1	....	....	3
Eng. and Hist. (Cl.)	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greek and Hebrew	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Moderns	....	5	....	....	1	6	2	....	4	....	3	....	1	2
English and Hist. (Mod.)	....	1	2	....	....	3	....	....	3	....	3	....	....	1
Modern History	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Political Science	....	1	2	....	....	3	1	2	....	....	....	....	....	1
Commerce and Finance	....	1	1	....	....	2	1	....	1	....	1	....	....	2
Math. and Phys.	....	1	1	....	....	2	2	....	....	....	....	....	....	....
Natural Science	....	3	1	1	....	5	3	....	2	....	1	....	....	3
Arts and Forestry	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Occasionals	9	....	....	....	....	9	6	....	....	3	....	....	....	....
Totals	9	45	37	6	42	139	50	14	57	18	9	....	1	56

First Year.

Courses.	University.	Univ. Coll.	Vic. Coll.	Trin. Coll.	St. M. Coll.	Totals.	Passed.	Granted standing on account of Mil. Service.	Starred.	Failed.	Transfer'd.	Aegrotat.	Deferred.	Debarred.
General	....	74	19	11	28	133	67	16	41	9	....	....	....	13
Supplementals	....	6	9	3	5	22	14	2	6	....	....	....	....	....
Gen. Course (House. Sc.)	....	16	10	1	....	27	13	....	13	1	1	....	....	8
Classics	....	6	6	2	2	16	12	3	1	....	1	....	....	....
Eng. and Hist. (Class.)	....	6	7	1	1	15	11	....	4	....	4	....	....	....
Greek and Hebrew	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Moderns	....	26	14	....	2	42	32	1	9	....	9	1	....	....
Eng. and Hist. (Mod.)	....	12	8	3	....	23	19	1	1	2	6	....	....	....
Modern History	....	10	3	....	1	14	10	....	4	....	1	....	....	....
Political Science	....	16	4	1	1	22	11	8	3	....	1	....	....	....
Commerce and Finance	....	6	4	....	....	10	4	....	5	1	4	....	....	....
Math. and Phys.	....	24	8	1	....	33	22	6	5	....	6	....	....	1
Natural Science	....	21	18	5	....	44	32	7	4	1	2	1	....	2
Arts and Forestry	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Occasionals	....	3	3	....	....	6	5	....	1	....	....	....	....	....
Totals	....	226	113	28	40	407	252	44	97	14	35	2	....	25

Second Year.

Courses.	University.	Univ. Coll.	Vic. Coll.	Trin. Coll.	St. Michael's College.	Totals.	Passed	Granted standing on account of Military Service.	Starred.	Failed.	Transfer'd.	Aegrotat.	Deferred.	Debarred.
General	....	58	31	6	19	114	49	14	42	9	....	..	..	19
Supplementals	....	25	17	1	5	48	38	6	4	....	....	..	..	..
General Course (House Sc.)	....	11	9	....	....	20	15	.....	5	....	....	..	..	2
Classics	....	4	2	....	1	7	3	2	2	....	1	..	..	1
English and History (Cl.)	....	3	1	1	....	5	3	2	....	....	....	..	..	..
Orientals (Greek Option)	....	1	....	....	....	1	1	.....	....	....	....	..	..	..
Moderns	....	24	9	1	2	36	28	2	5	1	3	2	..	3
English and History (Mod.)	....	12	6	5	....	23	20	2	1	....	....	2	..	..
Modern History	....	2	2	1	....	5	3	1	....	1	....	..	..	..
Political Science	....	21	5	1	....	27	13	7	1	6	....	1	..	..
Commerce and Finance	....	4	....	1	....	5	2	3	....	....	....	..	..	..
Philosophy	....	13	12	1	....	26	4	10	12	....	....	..	2	2
Mathmetics and Physics	....	14	9	1	....	24	12	4	5	3	....	..	2	2
Physics	....	....	....	....	....	....	....	.....	....	....	....	..	..	..
Biology	....	6	....	....	....	6	5	.....	1	....	....	..	..	..
Geology and Mineralogy	....	....	....	....	....	....	....	.....	....	....	....	..	..	..
Chemistry and Mineralogy	....	9	1	1	....	11	7	2	....	2	....	..	..	..
Biological and Physical Scs.	....	1	....	....	....	1	1	.....	....	....	....	..	..	..
Physiol. and Biochem. Scs.	....	4	1	....	1	6	3	2	1	....	....	..	..	..
Household Science	....	....	1	....	....	1	1	.....	....	....	....	..	..	..
Arts and Forestry	....	1	....	....	....	1	....	1	....	....	....	..	..	..
Occasionals	12	4	1	....	....	17	14	.....	....	3	....	..	..	..
Totals	12	217	107	20	28	384	222	58	79	25	4	5	4	29

Third Year.

Courses.	University.	Univ. Coll.	Vic. Coll.	Trin. Coll.	St. Michael's College	Totals	Passed.	Granted standing on account of Military service.	Starred.	Failed.	Transfer'd	Aegrotat.	Deferred.	Debarred.
General	....	56	40	7	20	123	68	18	28	9	....	..	..	8
Supplementals	....	23	7	....	2	32	17	8	7	....	....	..	..	..
General Course (House. Sc.)	....	10	5	....	....	15	10	.....	5	....	....	..	..	1
Classics	....	5	5	2	....	12	10	2	....	....	....	2	..	..
English and History (Cl.)	....	3	3	1	....	7	3	4	....	....	....	..	..	..
Orientals	....	....	1	....	....	1	1	.....	....	....	....	..	..	..
Greek and Hebrew	....	....	....	....	....	....	....	.....	....	....	....	..	..	..
Moderns	....	19	8	....	....	27	25	.....	2	....	....	2	..	..
English and History (Mod.)	....	7	1	2	1	11	10	.....	1	....	....	1	..	..
Modern History	....	....	1	....	....	1	1	.....	....	....	....	..	..	..
Political Science	....	10	5	....	....	15	4	7	3	1	....	1	..	..
Commerce and Finance	....	3	3	....	....	6	5	.....	1	....	....	..	..	..
Philosophy	....	6	5	....	7	18	11	4	3	....	....	..	..	..
Mathmetics and Physics	....	14	6	....	....	20	14	4	....	2	....	..	..	..
Physics	....	2	....	....	....	2	....	2	....	....	....	..	..	..
Biology	....	1	1	....	....	2	2	.....	....	....	....	..	..	..
Geology and Mineralogy	....	2	1	....	....	3	1	.....	2	....	....	1	..	1
Chemistry and Mineralogy I.	....	3	....	....	....	3	2	.....	1	....	....	..	..	..
Chemistry and Mineralogy II	....	1	1	....	....	2	1	1	....	....	....	..	..	..
Biological and Physical Scs.	....	3	2	....	....	5	3	1	1	....	....	..	..	..
Physiol. and Biochem. Scs.	....	2	2	....	....	4	3	1	....	....	....	..	..	..
Household Science	....	8	4	4	....	16	15	.....	1	....	....	..	..	..
Phys. and Household Sc.	....	....	....	....	....	....	....	.....	....	....	....	..	..	..
Arts and Forestry	....	....	....	....	....	....	....	.....	....	....	....	..	..	..
Occasionals	....	3	1	....	....	4	4	.....	....	....	....	..	..	..
Totals	....	181	102	16	30	329	210	52	55	12	....	7	..	10

Fourth Year.

Courses.	University.	Univ. Coll.	Vic. Coll.	Trin. Coll.	St. Michael's College.	Totals.	Passed.	Granted standing on acct. of Military Service.	Starred.	Failed.	Transferred.	Aegrotat.	Deferred.	Pass Deg.
General	..	68	30	11	6	115	69	28	17	1	..	....	..	....
Supplementals	..	6	1	....	1	8	6	.....	2	....	..	....	..	....
Classics	..	5	2	....	....	7	4	3	....	....	..	....	..	....
English and History (Cl.)	..	5	2	....	....	7	4	3	....	....	..	....	..	....
Greek and Hebrew	..	....	....	....	....	....	....	.....	....	....	..	....	..	....
Orientals	..	....	4	....	....	4	3	1	....	....	..	....	..	....
Moderns	..	19	7	3	2	31	28	1	2	....	..	....	1	....
English and History (Mod.)	..	11	4	....	1	16	14	2	....	....	..	....	..	....
Modern History	..	....	....	1	....	1	1	.....	....	....	..	....	..	....
Political Science	..	10	7	1	....	18	5	11	2	....	..	....	..	....
Commerce and Finance	..	1	6	....	....	7	1	6	....	....	..	....	..	....
Philosophy	..	5	2	2	7	16	11	3	2	....	..	1	..	....
Mathem. and Physics — Mathematics	..	8	....	....	....	8	6	1	1	....	..	....	..	....
Mathem. and Physics — Physics	..	4	2	....	....	6	5	1	....	....	..	....	..	....
Mathem. and Physics — Astro. & Physics	..	3	....	....	....	3	2	1	....	....	..	....	..	....
Physics	..	1	1	....	....	2	1	1	....	....	..	....	..	....
Biology	..	2	2	....	....	4	3	1	....	....	..	....	..	....
Geology and Mineralogy	..	....	....	....	....	....	....	.....	....	....	..	....	..	....
Chem. and Mineralogy I.	..	3	2	....	....	5	3	2	....	....	..	....	..	....
Chem. and Mineralogy II.	..	....	....	....	....	....	....	.....	....	....	..	....	..	....
Biol. and Phys. Sciences	..	1	2	....	....	3	3	.....	....	....	..	....	..	....
Physiol. and Biochem. Scs.	..	9	2	....	....	11	11	.....	....	....	..	....	..	....
Household Science	..	10	8	....	....	18	17	.....	1	....	..	....	..	....
Physiol. and Household Sc.	..	....	2	....	....	2	2	.....	....	....	..	....	..	....
Arts and Forestry	..	1	....	....	....	1	....	1	....	....	..	....	..	....
Occasionals	..	1	....	....	....	1	1	.....	....	....	..	....	..	....
Totals	..	173	86	18	17	294	200	66	27	1	..	1	1	....

(2) Faculty of Medicine.

——	Passed.	Granted standing on account of Military Service.	Starred.	Failed.
First Year	64	28	6	11
Second Year	53	9	7	2
Third Year	37	7	45	1
Fourth Year	67	.....	3	.....
Fifth Year	85	.....	10	1

(3) Faculty of Applied Science.

—	Passed with Honours.	Passed.	Granted standing on account of Mil. Service.	Starred.	Failed.
First Year:					
Civil Engineering	8	4	8	6	2
Mining Engineering	.....	.....	1	1	.....
Mechanical Engineering	6	1	1	.....	.....
Architecture	.....	1	1	.....	.....
Analytical & Applied Chemistry	3	2	1	1	1
Chemical Engineering	.....	.....	1	.....	.....
Electrical Engineering	11	7	7	4	2
Metallurgical Engineering	.....	1	.....	1	.....
Second Year:					
Civil Engineering	4	8	9	5	2
Mining Engineering	.....	1	.....	.....	.....
Mechanical Engineering	1	2	1	2	.....
Architecture	.....	1	2	.....	.....
Analytical & Applied Chemistry	.....	.....	2	.....	.....
Chemical Engineering	.....	1	2	1	.....
Electrical Engineering	4	4	4	1	.....
Metallurgical Engineering	.....	.....	.....	.....	.....
Third Year:					
Civil Engineering	9	6	16	5	.....
Mining Engineering	1	.....	1	2	.....
Mechanical Engineering	1	1	1	4	.....
Architecture	2	1	.....	1	.....
Analytical and Applied Chemistry	2	.....	.....	1	.....
Chemical Engineering	.....	2	.....	1	.....
Electrical Engineering	3	5	2	5	1
Fourth Year:					
Civil Engineering	10	9	12	.....	.....
Mining Engineerng	1	.....	.....	.....	.....
Mechanical Engineering	1	5	2	1	.....
Architecture	1	.....	1	.....	.....
Analytical & Applied Chemistry	4	.....	.....	.....	.....
Chemical Engineering	1	.....	1	1	.....
Electrical Engineering	5	7	2	1	.....
Metallurgical Engineering	1	.....	.....	.....	.....

(4) Faculty of Forestry.

——	Passed.	Granted standing on account of Mil. Service.	Honours Deferred.	Failed.
First Year	.....	1	.....	.....
Second Year	3	4	6*	.....
Third Year	5	1	.....	.....
Fourth Year	2	6	1*	.....
Forestry and Arts:				
First Year	.....	.....	.....	.....
Second Year	.....	1	.....	.....
Third Year	.....	.....	.....	.....
Fourth Year	.....	1	.....	.....
Fifth Year	.....	1	.....	.....
Sixth Year	.....	.....	.....	.....

* Withdrew before end of term.

(5) Faculty of Education.

——	Passed with Honours.	Passed.	Failed.
General Course	20	275	.....
Advanced Courses	1	4	.....
*Specialists	.....	41	.....
Household Science	.....	28	.....
Inspectors' Course	.....	1	.....
B. Pæd	.....	1	.....
D. Pæd	.....	1	.....
B. Pæd (passed in part)	.....	.....	.....
D. Pæd (passed in part)	.....	18	.....
Number who failed in whole or part	.....	.....	28

* Many of these are included among those who passed in the General or Advanced Courses

APPENDIX D.

Geographical Distribution of Students.

The geographical distribution of students is as follows:

FACULTY OF ARTS.

	University of Toronto.	University College.	Victoria College.	Trinity College.	St. Michael's College.	Total
Ontario: (1) Province	108	443	300	62	87	1,000
(2) Toronto	57	384	112	21	48	622
Nova Scotia	4	2	1	.....	1	8
New Brunswick	3	1	.....	.....	.....	4
Prince Edward Island	1	2	1	1	.....	5
Quebec	6	3	4	.....	1	14
Manitoba	10	6	2	2	.....	20
Saskatchewan	12	15	15	2	.....	44
Alberta	6	13	7	.....	.....	26
British Columbia	1	10	5	3	.....	19
Yukon	.....	1	.....	.....	.....	1
United States	20	11	1	2	3	37
Elsewhere	7	23	23	.....	.....	53
Totals	235	914	471	93	140	1,853

SUMMARY.

	Faculty of Arts.	Faculty of Medicine.	Faculty of Applied Science.	Faculty of Education.	Faculty of Forestry.	Faculty of Household Science.	Department of Social Service.	Summer Session.	Totals.
Ontario:									
(1) Province	1,000	315	183	352	17	6	89	238	2,200
(2) Toronto	622	174	134	70	9	20	142	107	1,278
Nova Scotia	8	3	1	1	.....	.....	5	.....	18
New Brunswick	4	1	.....	.....	.....	.....	1	.....	6
Prince Edward Island	5	.....	.....	.....	.....	.....	1	.....	6
Quebec	14	.....	5	2	1	.....	3	5	30
Manitoba	20	1	.....	1	2	.....	2	.....	26
Saskatchewan	44	13	5	4	.....	.....	2	.....	68
Alberta	26	10	3	6	2	.....	2	.....	49
British Columbia	19	5	6	1	.....	.....	.....	.....	31
Yukon	1	1	.....	.....	.....	.....	.....	.....	2
United States	37	4	5	.....	.....	.....	1	2	49
Elsewhere	53	3	3	.....	1	.....	4	1	65
Occasionals	.....	87	.....	.....	.....	.....	.....	.....	57
Totals	1,853	617	345	437	32	26	252	353	3,915
Less duplicate registration									47
									3,868

The students from the Province of Ontario are distributed as follows:

County.	Faculty of Arts.	Faculty of Medicine.	Faculty of Applied Science.	Faculty of Education.	Faculty of Forestry.	Faculty of Household Science.	Department of Social Service.	Summer Session.	Totals.
Algoma	7	6	2	2	.....	.....	1	5	23
Brant	20	4	4	6	.....	.....	1	18	53
Bruce	32	13	3	17	1	.....	4	5	75
Carleton	35	3	6	1	2	1	2	3	53
Dufferin	8	6	.....	4	.....	.....	1	5	24
Dundas	9	1	1	4	.....	.....	1	1	17
Durham	15	1	3	6	1	.....	2	2	30
Elgin	23	10	.....	10	.....	.....	.....	1	44
Essex	23	11	6	6	.....	.....	1	5	52
Frontenac	2	1	.....	.....	1	.....	.....	4	8
Glengarry	2	1	.....	1	.....	.....	.....	.....	4
Grenville	5	1	.....	3	.....	.....	1	2	12
Grey	41	19	8	15	.....	1	1	12	97
Haldimand	9	3	2	7	.....	.....	2	1	24
Haliburton	1	1	.....	.....	.....	.....	.....	.....	2
Halton	18	11	.....	6	.....	.....	1	.....	36
Hastings	18	6	3	8	.....	.....	5	3	43
Huron	36	16	7	24	1	.....	7	6	97
Kent	17	11	5	10	.....	.....	.....	7	50
Lambton	24	15	4	9	1	.....	.....	2	55
Lanark	18	2	6	4	1	.....	2	8	41
Leeds	8	3	1	1	.....	.....	.....	.....	13
Lennox and Addington	6	1	.....	2	.....	.....	1	.....	10
Lincoln	31	5	3	5	.....	.....	2	2	48
Manitoulin	3	.....	1	1	.....	.....	.....	.....	5
Middlesex	47	10	15	24	1	.....	8	18	123
Muskoka	4	.....	1	3	1	.....	2	1	12
Nipissing	11	3	3	4	.....	.....	2	.....	23
Norfolk	12	4	3	5	1	.....	2	4	31
Northumberland	14	8	.....	3	.....	.....	.....	4	29
Ontario	35	10	6	18	.....	1	3	5	78
Oxford	23	7	8	12	.....	.....	5	2	57
Parry Sound	4	1	.....	3	.....	.....	.....	6	14
Peel	20	6	7	4	2	.....	3	4	46
Perth	39	6	11	14	.....	.....	4	12	86
Peterborough	28	2	2	5	1	.....	2	12	52
Prescott	3	.....	.....	1	.....	.....	.....	2	6
Prince Edward	5	1	1	1	.....	.....	1	3	12
Rainy River	1	1	.....	.....	.....	.....	.....	.....	2
Renfrew	12	1	1	3	.....	.....	1	5	23
Russell	.....	.....	.....	1	.....	.....	1	1	3
Simcoe	89	25	5	17	.....	1	4	10	151
Stormont	4	.....	1	.....	.....	.....	.....	4	9
Sudbury	3	.....	.....	.....	.....	.....	.....	.....	3
Thunder Bay	9	2	2	2	.....	.....	.....	.....	15
Temiskaming	2	.....	.....	.....	.....	.....	.....	.....	2
Victoria	23	5	.....	8	.....	1	.....	7	44
Waterloo	16	11	6	10	2	.....	4	5	54
Welland	16	13	2	4	.....	.....	1	5	41
Wellington	46	15	5	21	.....	.....	3	12	102
Wentworth	75	15	17	13	.....	.....	2	7	129
York	44	15	18	24	1	1	6	17	126
Toronto	622	174	131	70	9	20	142	107	1,275
Totals	1,618	486	310	422	26	26	231	345	3,464

APPENDIX E.

Publications by Members of the Staff.

Faculty of Arts.

Department of Botany.

Walker, E. M.—"Notes on a Collection of Orthoptera from Prince Edward Island and the Magdalen Islands, Que." (Can. Ent., XLVII, 1915, pp. 339-344.)
"Aeshna umbrosa in Newfoundland." (Can. Ent., XLVII, 1915, p. 386.)
"Notes on Staurophlebia raticulata Burm." (Can. Ent., XLVII, 1915, pp. 387-395, pl. 17.)
"The nymph of Enallagma cyathigerum Charp." (Can. Ent., XLVIII., June, 1916.)
"Bibliography of Canadian Zoology (exclusive of Entomology)." (Trans. Royal Society of Canada, Series III., Vol. IX, Sec. IV, 1916, pp. 307-318.)

Department of Chemistry.

Allan, F. B.—"Orthobenzoyl-benzoyl Chloride." (In collaboration with H. C. Martin.) (Journal of the American Chemical Society, 38, 1916.)

Department of Classics.

Bell, A. J.—"Note on Catullus, 84." (Classical Review, August, 1915, 137-139 pp.)
"Horace and the Scholia." (Classical Review, November, 1915, 199-203 pp.)
Milner, W. S.—"Kennt Aristoteles die sogenannte tragische Katharsis? von Heinrich Otte." (Classical Philology.)

Department of English.

Clark, A. F. B.—
"Robert d'Humières." (The Nation, New York, Dec. 23, 1915.)
"A Dialogue by Boileau." (Modern Language Notes, May, 1916.)
Kennedy, W. P. M.—"Wolfe and Gray's Elegy." (Canadian Magazine, Sept., 1915.)
"Dante." (American Quarterly Review, October, 1915).
"The Spirit of The Great Earls—an Irish Idyll." (Catholic World, May, 1916.)
"Richard Hakluyt—The Spirit of Our Race." (Canadian Magazine, April, 1916.)
Wallace, M. W.—"The Life of Sir Philip Sidney." (Cambridge University Press, 428 pp.)

Department of French.

Squair, J.—"A series of over 70 articles on subjects connected with the present war (which appeared in "The University Monthly," "The Weekly Sun," and the "Toronto News").

Department of Geology.

Coleman, A. P.—"Dry Land in Geology." (Presidential Address, Geological Society of America.)

"Discussion of Dr. Howe's article on Sudbury Nickel Deposits." (Economic Geology, No. 4, Vol. X.)

"Radio-activity and the Earth's Thermal History." (Geological Magazine, Decade VI, Vol. II, No. 612.)

Parks, W. A.—"Report on the Building and Ornamental Stones of Canada, Vol. IV, Manitoba, Saskatchewan and Alberta." (Mines Branch, Department of Mines, Ottawa, 325 pages, with numerous drawings and plates.)

"Summary Report on the Building and Ornamental Stones of Manitoba." (Summary Report, Mines Branch, Department of Mines for 1914.)

Department of Modern History.

Kennedy, W. P. M.—"Studies in Tudor History." (pp. 398. Constable & Co., London, 1916.)

Wrong, G. M.—"Elba: A Hundred Years After." (Transactions of the Royal Society of Canada, 1915, Series III, Vol. IX, pp. 205-222.)

"Canada: An Outline and Bibliography of Its History." (Published by the League of the Empire in the Federal Magazine, Dec., 1915, and Jan.-Feb., 1916.)

"The Chronicles of Canada." (In collaboration with Mr. H. H. Langton.)

"The Review of Historical Publications relating to Canada, Vol. XX." (Publications of the Year 1915.) (In collaboration with Mr. H. H. Langton and Mr. W. S. Wallace.)

Review of books in The American Historical Review.

"Outline of the Proposals of the Commission." (The Report of the Federal Plan Commission on a General Plan for the Cities of Ottawa and Hull, 1915.)

Department of Italian and Spanish.

Northup, G. T.—"The Influence of George Borrow upon Prosper Mérimée." (Modern Philology, July, 1915.)

Department of Mathematics.

Baker, Alfred.—"Canada's Intellectual Status and Intellectual Needs." (Presidential Address before the Royal Society of Canada, May, 1916.)

Department of Mineralogy.

Ellsworth, H. V.—"A Study of Certain Minerals from Cobalt, Ontario." (Report of Bureau of Mines, Toronto, 1916.)

Ledoux, A.—"Sur les propriétés géométriques des mélanges isomorphes. Application aux pyroxenes rhombiques et monocliniques." (Bull. Soc. Franc. de Mineralogie, 1916.)

"Les mineraux du district de Templeton." (Geological Survey of Canada, Ottawa.)

"Mineralogical Exploration of East Templeton District, Quebec." (Summary Report, Geological Survey of Canada, Ottawa, 1916.)

McNairn, W. H.—"The Growth of Etch Figures." (Royal Canadian Institute, 1916.)

Parsons, A. L.—"The Productive Area of the Michipicoten Iron Ranges." (Ontario Bureau of Mines, XXIV Annual Report, Part I, pp. 185-215.)

"Proustite from Cobalt, Ontario." (Mineralogical Magazine, Volume XVII, pp. 309-313.)

"Iron Deposits of Hunter Island with Notes on Gunflint Lake Region." (Ontario Bureau of Mines, XXV Annual Report.)

Walker, T. L.—"Spencerite, a new zinc phosphate from British Columbia." (Mineralogical Magazine.)

Department of Philosophy.

Abbott, A. H.—"Report of the Red Cross Fund for Ontario."

Brett, G. S.—"Chevalier, J.: La notion du nécessaire chez Aristotle." (Philosophical Review, XXV, Jan., 1916.)

Hume, J. G.—Short Articles and Reviews Referring to the War.

"Philosophy in Germany and Elsewhere." (The Westminster, July, 1915.)

"The Attitude of Americans." (The Globe, April 19th, 1916.)

"The United States and the Great War: Two Notable Books."
Reviews of "Fear God and Take Your Own Part," Theodore Roosevelt, and "The Greater Tragedy and Other Things," Benjamin Apthorp Gould. (The Globe, April 29th, 1916.)

"Discussion of 'Mirror Writing.'" (The Journal of the American Society for Psychical Research, Dec., 1915.)

Department of Physics.

McLennan, J. C.—"On the mobilities of ions in air at high pressures." In collaboration with D. A. Keys. (Phil. Mag., Oct., 1915; Can. Roy. Soc. Trans. Vol. IX, 1915.)

"Residual Ionisation in Gases." In collaboration with C. L. Treleaven. (Phil. Mag., Sept., 1915; Can. Royal Soc. Trans. Vol. IX, 1915.)

"On the Residual Ionisation in air enclosed in a vessel of ice." In collaboration with H. G. Murray. (Phil. Mag., Sept., 1915; Can. Roy. Soc. Trans., Vol. IX, 1915.)

"On the ionisation tracks of alpha rays in hydrogen." In collaboration with H. N. Mercer. (Phil. Mag., Nov., 1915; Can. Roy. Soc. Trans. Vol. IX, 1915.)

"On the ultraviolet spectrum of elementary silicon." In collaboration with E. Edwards. (Phil. Mag., Oct., 1915; Can. Roy. Soc. Trans. Vol. IX, 1915.)

"On the delta radiation emitted by zinc when bombarded by alpha rays." In collaboration with C. G. Found. (Phil. Mag., Oct., 1915; Can. Roy. Soc Trans. Vol. IX, 1915.)

"On the infra-red emission spectrum of the mercury arc." In collaboration with R. C. Dearle. (Phil. Mag., Nov., 1915; Can. Roy. Soc. Trans. Vol. IX, 1915.)

"On the absorption spectra of mercury, cadmium, zinc and other metallic vapours." In collaboration with E. Edwards. (Phil. Mag., Nov., 1915.) (First Paper.)

"On the absorption spectra of mercury, cadmium, zinc and other metallic vapours." In collaboration with E. Edwards. (Can. Roy. Soc. Trans. Vol. IX, 1915.) (Second Paper.)

"Ionisation potentials of mercury, cadmium, zinc, and the single and many-lined spectra of these elements." In collaboration with J. P. Henderson. (Proc. Roy. Soc. A. Vol. 91, 1915.)

"On the single line spectra of magnesium and other metals and their ionising potentials." (First Paper.) (Proc. Roy. Soc. March, 1916.)

"On the single line spectra of magnesium and other metals and their ionising potentials." (Second Paper.) (Journal, Franklin Institute, Feb., 1916.)

Department of Political Science.

Jackman, W. T.—"The Development of Transportation in Modern England." (2 vols., pp. XV, VII, 820. Cambridge University Press, Cambridge. England.)

Lefroy, A. H. F.—Articles in the Canadian Law Times.

MacIver, R. M.—"The Meaning of Nationality." (Sociological Review, July, 1915.)

"Personality and the supra-personal." (Philosophical Review, Nov., 1915.)

FACULTY OF MEDICINE.

Department of Anatomy.

McMurrich, J. P.—"The Place of Science in Education." (The School, Vol. 3, 1915.)

"Medical Ideals in the Ancient World." (The Canadian Med. Assoc. Journ., Vol. V, 1915.)

Watt, J. C.—"An Abnormal Frog's Heart, with Persisting Dorsal Mesocardium." (Anatomical Record, Vol. 9, No. 9. September, 1915.)

Department of Gynæcology and Obstetrics.

Cleland, F. A.—"The Attitude of the Gynæcologist to Cancer." (The Public Health Journal, Toronto.)

"Uterine Hemorrhage at and After the Menopause." (The Canadian Journal of Medicine and Surgery.)

MacMurchy, Helen.—"Tenth Annual Report on the Feeble-Minded for Ontario." (Report on Auxiliary Classes, 1916.)

Department of Medicine.

Brown, Alan.—"Some New Features in the Diagnosis of Scurvy, with Brief References to Metabolic Changes."

"Influenza-Meningitis, with report of two cases."

"Duodenal Ulcers in Infancy."

"Protein Milk: Its composition, indications and results during one and a half year's experience in the Infants' Department of the Hospital for Sick Children."

"The Feeding Interval."

"Maternal Nursing: Present Status in Canada."

Ferguson, John.—"The Cancer Problem." (The Canadian Practitioner, July, 1915.)

"The Medical Commission." (The Canadian Practitioner, December, 1915, and the Canada Lancet, Nov., 1915.)

"Medical Practice as a Public Service." (The Can. Prac., Feb., 1916; the Can. Lancet, Feb., 1916.)

"The History of Medicine in Great Britain." (The Canada Lancet, May and June, 1916.)

"Christian Science Treatment." (The Canada Lancet, June, 1916.)

"Editorials in Canada Lancet." (From 1st of July, 1915, to 30th June, 1916.)

Loudon, J. D.—"A System of Case-Taking." In collaboration with Dr. G. W. Ross. (The Macmillan Company of Canada, Toronto, 1916.)

Department of Ophthalmology.

Burnham, G. H.—"The Operation Treatment of Acute Glaucoma." (Ophthalmic Record.)

"Some Unusual Features in the Case of a Senile Cataract Extraction." (Ophthalmic Record.)

Department of Oto-Laryngology.

Wishart, D. J. G.—"Animal Extracts in Rhinology and Otology." (Can. Med. Assoc. Journal, August, 1915.)

"The Tonsil Operation: An Inquiry into the Actual Results Obtained in a Series of Cases." (Annals of Otology, Rhinology, and Laryngology, Sept., 1915.)

"The Origin of the Naso Antral Polyp." (Canadian Medical Association Journal, Jan., 1916.)

"The Evolution of the Specialist in Oto-Laryngology." (The Laryngoscope, Jan., 1916.)

Department of Pathological Chemistry.

Hunter, A.—"Experiments upon the Fate of Ingested Sodium Nucleate in the Human Subject." In collaboration with M. H. Givens. (Journ. Biol. Chem. XXIII, p. 299.)

Department of Physiology.

Hartman, F. A.—"The Symptoms of Urinod Poisoning." (Archives of Internal Medicine, July, 1915, Vol. XVI, p. 98.)

"The Differential Effects of Adrenin on Splauchnic and Peripheral Arteries." (American Journal of Physiology, Oct., 1915, Vol. XXXVIII, p. 438.)

Department of Surgery.

Gallie, W. E.—"Tendon Fixation: Review of One Hundred Operations." (Annals of Surgery, October, 1915.)

"The Spinal Graft." (Journal of the American Orthopædic Assn., March, 1916.)

"Tendon Fixation: Observations Based on One Hundred and Fifty Operations." (Journal of the American Orthopædic Ass'n., Jan., 1916.)

"Open Operations for Fractures: An Experimental Study." (Canadian Journal of Medicine and Surgery, May, 1916.)

Primrose, A.—"The Physics of a Surgical Dressing, with special reference to the Harmful Effect of Using Impermeable Material over Septic Wounds." (British Medical Journal, Feb., 1916.)

"Disabilities, Including Injuries, caused by Bullets, Shrapnel, High Explosives, etc., as Illustrated by Cases Examined before a Medical Board at Canadian Headquarters, Shorncliffe, England." (Canadian Medical Association Journal, October, 1915.)

FACULTY OF APPLIED SCIENCE.

Department of Mechanical Engineering.

Arkley, L. M.—"Radiator Traps and Test Data." (The Power House, Toronto; Sanitary Engineer, Toronto, June, 1915; Applied Science, August, 1915; The National Engineer, Chicago, December, 1915; Heating and Ventilating Magazine of New York, Sept., 1915.)

Traill, J. J.—"Experiments on the Flow of Water through Sluiceways." In collaboration with N. E. D. Sheppard. (The Canadian Engineer, Sept. 2, 1915.)

Department of Mining Engineering.

King, J. T.—"The Calculation of Metallics' Problems." (Engineering and Mining Journal of New York, June, 1916.)

Department of Surveying.

Ransom, J. T.—"Balancing a Traverse Survey." (Annual Report of the Association of Ontario Land Surveyors.)

FACULTY OF FORESTRY.

Fernow, B. E.—"Co-operation in Forestry." (Commission of Conservation of Canada.)

"Silvicultural Problems of Canadian Forest Reserves." (Commission of Conservation of Canada: Forestry Quarterly, 1916, Vol. XIV, No. 1.)

"Professional Ethics." (Proc. of the Soc. American Foresters, 1916, Vol. XI, No. 1.)

"Suggestions in Regard to the Possibilities of Silviculture in America." (Proc. of the Soc. of American Foresters, 1916, Vol. XI, No. 2.)

Howe, C. D.—"The Reproduction of Commercial Species in the Southern Coastal Forests of British Columbia." (Commission of Conservation, Ottawa, 1915.)

Millar, W. N.—"Game Preservation in the Rocky Mountains Forest Reserve." (Department of the Interior, Canada, Dominion Forestry Branch Bulletin No. 51.)

"Forestry Investigations in Canada." (Forestry Quarterly, Vol. XIII, No. 4.)

"Brush Disposal in Alberta." (Forest Protection in Canada, 1913-1914; Commission of Conservation of Canada.)

FACULTY OF EDUCATION.

"The School," a magazine devoted to elementary and secondary education in Canada, published by the members of the Staff of the Faculty of Education.

Sandiford, P.—"Liberty in the School." (School and Society, 1, 19, pp. 657-660.)

"The Training of Teachers in England." (Proceedings, Ontario Educational Assn., 1915, pp. 279-284.)

"Health and Education." (The Child, VI, 4, pp. 178-187.)

SUPERINTENDENT'S REPORT.

Buildings.

The total appropriation granted by the Board of Governors for the year 1915-16, to cover the care, cleaning and maintenance of the 28 buildings and the grounds, including the cost of operation of the Central Heating and Lighting Plant, was $140,559.

Owing to the financial conditions the greatest economy has been exercised, and only $116,957 was expended of the above sum. From this amount there should be deducted the sum of $12,986 receivable from Wycliffe College, Knox College, the Victoria College group, the Royal Ontario Museum, University Press and Students' Book Department for heat and light supplied to these institutions, making a net expenditure for the year of $103,971, which includes all the charges for heating, lighting, cleaning, repairs, and care of all the buildings and grounds.

Grounds.

With the exception of the front and back lawns, the grounds continue to show improvement. Some successful work has been done in tree transplanting to fill up gaps that are constantly occurring.

In order to be prepared for the time when the demands for the use of the lawns for military training will be no longer necessary, I wish to recommend that the Board of Governors place on record that the lawns should be ploughed up and sown as soon as possible, and that, in order to get a satisfactory result, it would be advisable to enclose the lawns with a fence.

I hope shortly to be able to lay before the Board the completed and revised plans as drawn up by Messrs. Townsend and Fleming, showing the possibilities for future development and their suggestions in reference to roads and planting.

Domestic Telephones.

I would again bring to the attention of the Board the question of domestic telephones.

I have on several occasions reported on this matter and have pointed out the great convenience it would be to the administrative offices and the members of the teaching staff.

I would strongly recommend an automatic system in order to be able to dispense with the services of switchboard operators, whose salaries alone would be sufficient to pay 10 per cent. on the capital required to make such an installation.

It is quite evident from the installations mentioned below that the automatic system is successful, and the fact that the equipment is purchased and there is no annual rental to meet, is greatly in its favour:—

General Post Office, London	540	telephones.
Equitable Trust Co.	15	"
Michigan Agricultural College	116	"
Bellevue Hospital	186	"
Vassar College	67	"
Sears-Roebuck Co., Chicago	600	"
Larkin & Co., Buffalo	423	"
Hengerer and Co., Buffalo	130	"
Baldwin Locomotive Works	147	"
Remington Arms Co.	218	"
Morgan and Wright, Detroit	125	"
New York Central R.R.	431	"
Illinois Central R.R.	156	"
Kansas City Terminal R.R.	245	"
Louisville and Nashville R.R.	262	"
Michigan Central R.R.	295	"

The fact that such an equipment may be tried out for six months before any payment is made indicates that the company is very sure of its facts, and is prepared to run the risk of having the equipment returned on its hands if it does not prove satisfactory.

The first step to be taken is the wiring of the buildings and connecting them to some central point which I have estimated to cost $1,000. If this portion of the work could be undertaken during the coming season it would greatly expedite the completion of such a system.

The above expenditure of $1,000 would also cover the wiring of the buildings and connecting them for the night watchmen's signals, electric bells, electric clocks, etc. If this expenditure was made, it would be possible to try out the telephone system without committing the Board to its purchase unless it proved satisfactory.

Use of Laboratories.

Many of the scientific laboratories are used by members of the staff and by persons to whom they have given permission, for the purpose of making experiments and tests for which they frequently receive remuneration.

Gas, electricity and water are used in the work, for which, in the majority of cases, no return is made to the University, as I am not advised that the work being done is of a private nature.

On inquiry from similar institutions in the United States, I am informed, when work of a remunerative nature is being done by the members of the staff, or when persons not connected with the institution are anxious to make tests or experiments, that formal application must be made for the privilege, and a daily fee is charged for the use of the laboratory and cleaning the same, and a charge for electricity, gas, water, chemicals and breakages is also made to cover these items.

Central Heating Plant.

The operation of the Central Heating Plant has again been most satisfactory. A slight increase in the cost of fuel and a slight decrease in temperature have caused a small increase in the cost of heating, based on the amount of radiation.

I regret that I must forecast a considerable increase next year, as the cost of both fuel and labour has risen.

Alterations have been carried out in the power-house and tunnels which will eventually result in improvement in the operation.

Certain labour-saving additions to the power-house, such as an ash elevator, would cause an increased saving and simplify the labour question.

Last year I reported to the Board, recommending an increase in the size of the power-house, having in view the fact that Hart House would be requiring a larger quantity of steam. This, however, will probably not be necessary for 18 months, and in the meantime, after consulting with the Murphy-Stokers firm, they are in hopes that they will be able to increase the efficiency of the boilers to enable us to carry on without any alterations. It may be necessary, however, to enlarge the feed water heater tank, as the radiation has considerably increased since the first installation.

Owing to difficulties, which are arising more frequently each year, in obtaining fuel, it appears to me that it will be absolutely necessary for the university, in the near future, to provide some place in which coal may be stored to meet emergencies. The contract for coal for 1916-17 calls for the delivery of 1,600 tons prior to the 1st of October. On Saturday, the 16th of September, owing to railway troubles and shortage of cars, we had received 130 tons. This would have been obviated if it had been possible to store coal during the months of July and August for future consumption. The objection to renting grounds temporarily is the high rental and, if the storage is not on the railway tracks, the increased cost in handling. Under these circumstances, it is highly probable that a considerable saving would be made if the Board of Governors would consider the purchase of a property abutting on the C.P.R. tracks in the neighbourhood of Dupont Street, which could be used for this purpose. As this would be a charge against the fuel for the power-house, it would appear to me that the only way to finance it would be to capitalize the cost and to charge interest and sinking fund against the fuel account in the annual cost of operation. In this way the charge would be evenly distributed against the different colleges participating in the benefits of the power plant. I am at present looking into the question of a suitable site, and, should I find one, will report more fully to the Board at once.

Appended are the comparative reports showing the amount of fuel used, the average temperatures, distribution of the cost of operation to the various buildings, total cost and cost per square foot of radiation:—

Coal.

	1914-15	1915-16
Maximum Daily Consumption	54 tons	71 tons
Maximum Weekly Consumption	396 "	447 "
Average Daily Consumption—		
September 27th to October 31st	13.2 "	15.5 "
November	29.1 "	26.1 "
December	41.5 "	37.6 "
January	44.5 "	44.5 "
February	44.9 "	53.2 "
March	38.6 "	46.4 "
April	18.6 "	23.3 "
May	7 "	9.8 "
Total Consumption	7,146 tons	7,751 tons
Cost	$25,139 74	$27,327 63
Load in Square Feet of Radiation	196,534	205,126

Temperatures.

(On basis of average taken from 1840-1898.)

	1914-15	1915-16
October	52.75—6.20 above average	51.94—5.39 above average
November	38.13—2.17 " "	40.70—4.73 " "
December	25.72— .47 below "	27.59—1.40 " "
January	23.62—1.77 above "	30.10—8.25 " "
February	26.04—3.87 " "	18.92—3.25 below "
March	29.03—1.24 " "	25.36—3.33 " "
April	49.82—8.65 " "	44.40—3.23 above "
May	52.14— .30 below "	54.27—1.87 " "
Yearly Average	2.89 above "	2.28 " "

Total Cost of Operation.

1914-15	1915-16
$39,598.97	$42,116.52

Cost Per Square Foot of Radiation.

20.148c.	20.532c.

Distribution of Cost of Operation of Central Plant.

Buildings	1914–15		1915–16		1914–15		1915–16	
	Square ft. of Radiation in Buildings.	Percentage Charge	Square ft. of Radiation in Buildings.	Percentage Charge	Light.	Heat.	Light.	Heat.
Main	12,936	8.581	12,936	7.978	$704 46	$2,727 55	$562 66	$2,816 65
Gymnasium	.....	.....	.....	.....	16 92	.....	83 40	.....
Hart House	5,000	1.965	10,000	4.535	.....	624 59	76 08	1,601 09
Library	10,829	4.788	10,874	4.645	375 24	1,521 91	353 26	1,639 93
Medical	7,160	5.232	7,288	4.878	325 34	1,663 04	371 08	1,722 19
Biological	8,271	3.429	8,271	3.598	114 20	1,089 94	119 10	1,270 28
Engineering	9,084	4.186	9,148	4.011	903 72	1,330 56	834 06	1,416 09
Thermodynamics	*6,114	1.769	6,114	2.027	48 32	562 29	57 98	715 64
Observatory	783	.348	783	.310	1 54	110 61	5 02	109 44
Mining	13,721	6.467	13,721	8.313	835 92	2,055 60	608 99	2,934 93
Chemical	6,595	3.148	6,635	2.944	87 74	1,000 61	86 72	1,039 39
Physics	19,648	8.272	19,648	7.270	885 50	2,633 44	1,151 38	2,566 69
Convocation Hall	6,689	3.468	6,689	3.429	257 76	1,102 33	235 00	1,210 62
Men's Residences	9,336	5.335	9,336	5.215	734 88	1,695 78	603 90	1,841 16
4 Queen's Park	.....	.....	.....	.....	37 76	.....	21 80	.....
Household Science	10,137	5.646	10,137	4.900	222 16	1,794 63	189 92	1,729 95
R. O. Museum	17,303	6.800	17,183	7.117	104 48	2,161 44	78 22	2,512 67
Social Service	.....	.....	.....	.....	.....	.....	9 36	.....
Grounds	.....	.....	.....	.....	200 00	.....	200 00	.....
Wycliffe College	12,371	7.288	12,371	6.602	970 60	2,316 56	149 60	2,330 84
Victoria College	9,028	4.412	9,028	3.903	186 04	1,402 39	158 90	1,377 96
Victoria Library	4,021	1.592	4,021	1.793	15 50	506 03	12 60	633 02
Annesley Hall	4,274	2.877	4,274	2.690	90 92	914 48	101 68	949 71
Burwash Hall	8,234	6.648	8,234	5.977	284 48	2,113 13	328 66	2,110 19
Burwash Dining Hall	.....	.....	.....	.....	65 62	.....	104 16	.....
Knox College	15,000	7.736	18,435	7.865	344 00	2,458 96	217 80	2,776 75
	196,534	99.987	205,126	100.000	$7,813 10	$31,785 87	$6,811 33	$35,305 19

*Thermodynamics Building only heated at night, so percentage is halved.

AUDITOR'S REPORT.

TORONTO, 6th October, 1916.

To the Governors of the University of Toronto:

GENTLEMEN,—Herewith I present the Financial Statement of the University for the fiscal year ending 30th June, 1916, and beg to report that all the transactions of the year upon Revenue Account and Capital Account have been duly audited and approved of.

Yours faithfully,

(Sgd.) G. T. CLARKSON,

Auditor.

FINANCIAL STATEMENT

APPENDIX I.

BALANCE SHEET, 30TH JUNE, 1916.

Funds.

General Endowments Fund	Schedule 1	$5,631,166 71	
Specific Endowment Funds	" 2	125,243 54	
Retirement Fund	" 3	30,873 10	
Trust Funds	" 4*a*	101,469 70	
Equipment Funds	" 4*b*	9,009 13	
Annuity Debentures	" 4*c*	984,982 43	
Contingent Funds	" 5*a*	14,672 22	
Fees paid in advance		2,960 00	
			$6,900,376 83

Assets.

Site Lands, Buildings and Contents	Schedule 6	$5,529,748 26	
Unproductive Lands	" 7	59,784 29	
Leased Properties	" 8	579,433 90	
Investments and Cash	" 9	480,407 58	
Royal Ontario Museum Investment		251,002 80	
			$6,900,376 83

SCHEDULE 1.

General Endowments Fund.

Additions for 1915-16:			
Receipts from Frontage Licenses:			
Douglas S. Murray	$100,000 00		
Francis J. Scott	480 00		
		$100,480 00	
Sale of East half Lot 5, Con. 3, Marmora		100 00	
Convocation Hall Advance:			
Restoration from proceeds of Wild Lands sales, tenth instalment		673 82	
Annuity Debentures:			
Portion of 1915-16 instalments reducing principal:			
Seventh instalment, issue of July, 1909	$6,657 33		
Fifth instalment, issue of January, 1911	1,603 00		
Fifth instalment, issue of January, 1911	3,698 00		
First instalment, issue of April, 1915	1,027 27		
		12,985 60	
Central Power Plant:			
Repayment during the year from Revenue Account (fifth instalment)		20,208 00	
Increased capitalization of Lease of parts Lots 1 and 2, University Park, upon renewal		4,250 00	
Increased valuation of Lot 5 and part Lot 4, University Park (lease surrendered), 19,613 square feet, on basis of 40c. per square foot	$7,845 20		
Less amount of account hitherto carried in Leased Lands	2,720 00		
		5,125 20	
Building No. 8 Queen's Park, first of ten instalments paid from Revenue 1915-16, on purchase as per Schedule 6		750 00	
			$144,572 62

General Endowments Fund.—Continued.

Contra.

Library depreciation written off as per Schedule 6		2,035 50
		$142,537 12
Fund as per return of 30 June, 1915		5,488,629 59
Fund of 30 June, 1916		$5,631,166 71

SCHEDULE 2.

Specific Endowment Funds (Scholarships, Etc.).

Blake Matriculation	$29,308 72	
Mackenzie Memorial	18,709 60	
McCharles Bequest	11,822 59	
James H. Richardson Research Fellowship	10,000 00	
Starr Bequest	5,832 46	
Pearson Kirkman Marfleet Lectureship	5,500 00	
George Brown, Medical Science	5,391 72	
Blake, Science and Moderns	3,750 00	
Young Memorial	3,690 06	
Fulton Bequest	3,351 30	
Mary Mulock, Classics	2,838 74	
George A. Peters Scholarship	2,700 00	
Gibson, Matriculation	2,525 00	
A. A. A. S. Scholarship, Physics	2,350 00	
John Macdonald, Philosophy	2,030 00	
Moss, Classics	2,000 00	
William Mulock, Classics and Mathematics	2,000 00	
Daniel Wilson, Natural Science	2,000 00	
All Souls Historical Essay Prize	1,950 00	
Bankers', Political Science	1,200 00	
George Brown, Modern Languages	1,128 34	
William Ramsay, Political Economy	1,009 42	
Julius Rossin, German	1,000 00	
Prince of Wales, General Proficiency	950 00	
Flavelle Travelling Fellowship	500 00	
Chappell Prize	466 80	
Lyle Medal	348 79	
Squair French Prose Prize	270 00	
Reeve Scholarship	250 00	
Boiler Inspection and Insurance Company Scholarship	260 00	
Board of Trade, Commercial	100 00	
Alumnæ Prize in English	10 00	
Ledger balances on 30 June, 1916		$125,243 54
Return of 30 June, 1915	$124,423 60	
Interest written to endowments	4,605 14	
Income from bonds, Gibson Scholarship	140 00	
Receipts other than above	645 00	
	$129,813 74	
Scholarship expenditures	4,570 20	
Return of 30 June, 1916		$125,243 54

SCHEDULE 3.

Retirement Fund. Beneficiaries. 30 June, 1916.

W. Lash Miller	$6,762 75
T. L. Walker	5,726 96
A. P. Coleman	4,079 27
W. H. Ellis	4,079 27
J. C. Fields	2,623 30

Retirement Fund, Beneficiaries, 30 June, 1916.—Continued.

W. A. Parks	2,470 31	
J. W. Bain	1,975 04	
H. W. Price	1,440 28	
E. M. Walker	1,150 84	
James Christie	565 08	
		$30,873 10
Fund of 30 June, 1915	$36,283 38	
Contributions, 1915-16	2,990 00	
Interest	1,468 34	
	$40,741 72	
Withdrawals:		
R. A. Falconer	9,868 62	
Return of 30 June, 1916		$30,873 10

SCHEDULE 4*a*.

Trust Funds.

King Alfred Millenary Fund (Library)	$10,838 60	
Phillips Stewart Bequest (Library)	1,537 20	
John Squair French Library Fund	1,054 50	
University Studies	3,133 36	
E. C. Walker Bequest (Residences)	25,250 00	
Fulford Estate Donation (Base Hospital)	32,147 82	
Mary A. Simpson Bequest	1,307 31	
Naomi Bilton Bequest	1,750 00	
Medical Research Fund	13,850 81	
Experimental Laboratories Research Fund	3,000 00	
Ontario Archæology Special Fund	485 00	
Microscopes Fund, Pathology	1,080 00	
John Langton Memorial	30 00	
Sundry Deposits:		
Men's Residences	725 00	
Women's Residences	605 00	
Summer Session	1,720 00	
Keys	85 00	
Dr. Franklin Johnson, Jr.	2,000 00	
Massey Treble Estate (Miss Laird)	870 10	
		$101,469 70
Return of 30 June, 1915	$37,899 54	
Interest appropriations	1,734 75	
Receipts:		
Medical Research Fund	7,900 00	
Experimental Laboratories Research Fund	1,250 00	
University Studies	471 26	
Microscopes Fund, Pathological Department	180 00	
E. C. Walker Bequest	25,000 00	
Fulford Estate Donation	40,000 00	
N. Bilton Bequest	1,500 00	
Men's Residence Deposits	520 00	
Women's Residence Deposits	235 00	
Summer Session Deposits	2,060 00	
Key Deposits	70 00	
Massey Treble Estate	870 10	
		119,690 65
Expenditures:		
King Alfred Millenary Fund	$68 76	
Phillips Stewart Bequest	42 77	
University Studies	291 50	
Medical Research Fund	4,986 99	
Experimental Laboratories Research Fund	1,000 00	

Trust Funds.—Continued.

Fulford Estate Donation	8,800 93	
Men's Residence Deposits	775 00	
Women's Residence Deposits	160 00	
Summer Session Deposits	2,015 00	
Key Deposits	80 00	
		18,220 95
Return of 30 June, 1916		$101,469 70

SCHEDULE 4*b*.

Equipment Funds.

University Press:		
Balance unappropriated on 30 June, 1915	$3,031 04	
Transferred from Operating Account (Appendix IV)	1,787 09	
Unappropriated on 30 June, 1916		$4,818 13
Antitoxin Laboratory:		
Balance unappropriated on 30 June, 1915	$1,926 59	
Transferred from Operating Account (Appendix V)	2,264 41	
Unappropriated on 30 June, 1916		4,191 00
		$9,009 13

SCHEDULE 4*c*.

Annuity Debentures.

Issue of July, 1909, $500,000, repayable in forty equal annual amounts of $25,260 each.	
Value as on 30 June, 1916, of the (thirty-three) outstanding instalments	$458,409 40
Issue of January, 1911, under 1 George V, Cap. 80, for construction of Pathological building, $130,000, repayable in forty equal annual amounts of $6,568 each.	
Value as on 30 June, 1916, of the (thirty-five) outstanding instalments	122,591 00
Accrued on 30 June, 1916, of sixth payment and charged to Revenue, 1915-16	3,284 00
Issue of January, 1911, under 1 George V, Cap. 80, as a grant towards construction of Toronto General Hospital, $300,000, repayable in forty equal annual instalments of $15,157 each.	
Value as on 30 June, 1916, of the (thirty-five) outstanding instalments	282,902 00
Accrued on 30 June, 1916, of sixth payment and charged to Revenue, 1915-16	7,578 50
Issue of April, 1915, under R.S.O. 1914, Cap. 279, to provide for the payment of $100,000 to the Hart A. Massey Estate towards the Gymnasium portion of Hart House, $110,000, repayable in forty equal annual instalments of $5,975 each.	
Value as on 30 June, 1916, of the (thirty-nine) outstanding instalments	108,972 73
Accrued on 30 June, 1916, of second payment and charged to Revenue, 1915-16	1,244 80
	$984,982 43

SCHEDULE 5*a*.

Contingent Funds.

Contingent Fund (Investment Reserve):		
Fund of 30 June, 1915		$22,603 15
Sundry Ledger balances:		
Fire Premiums paid in advance	$15,029 89	
Superintendent's Stores Account (Merchandise)	2,266 43	

Contingent Funds.—Continued.

Convocation Hall Organ:			
Return of 30 June, 1915	$995 15		
Expenses of recitals and upkeep, 1915-16..	364 60		
	$1,359 75		
Less surplus music fees transferred	1,228 80		
		130 95	
			17,427 27
			$5,175 88
Special Grant received from Provincial Government		$80,000 00	
Charged thereto:			
Deficit upon Revenue Account, 1915-16, as per Schedule 5*b*	$55,488 89		
Deficit brought forward from 1914-15, as per Report of that year	15,014 77		
		70,503 66	
Balance unappropriated on 30 June, 1916			9,496 34
			$14,672 22

SCHEDULE 5*b*.

Revenue, 1915-1916.

Receipts.

		Estimate.	Actual.
Legislative Grant, University Act, 1906		$500,000 00	$500,000 00
Legislative Grant, 60 Vict., Cap. 59		7,000 00	7,000 00
Provincial Grant, on account of Faculty of Education (inclusive of $9,000 due, carried in Accounts Receivable)		15,000 00	15,000 00
Provincial Grant for special course in Household Science		4,500 00	4,367 00
Fees, University and College, as detailed in Appendix II		225,000 00	215,312 55
Interest:			
On Purchase Moneys		2,000 00	1,675 98
On Loans		1,100 00	1,251 31
On Debentures		10,000 00	10,071 13
On Bank Balances		.....	1,237 55
Rentals:			
University Park ground leases		15,800 00	16,338 90
City of Toronto payment		6,000 00	6,000 00
Business Properties		3,070 00	3,070 00
Sundry Houses, etc.		2,700 00	2,838 91
Sundry Land Earnings		.....	120 00
Men's Residence Dues		13,000 00	11,608 25
Women's Residence Dues		16,000 00	16,712 65
Dining Hall Receipts		31,250 00	30,932 13
Central Power Plant Receipts:			
Royal Ontario Museum	$2,590 89		
Carried in Accounts Receivable, amounts due by Wycliffe, Victoria and Knox Colleges..	16,489 01		
Sundry Sales of Electric Power, etc.	561 85	20,000 00	19,641 75
Casual Revenue		.....	1,500 18
		$872,420 00	$864,678 29

Expenditures.

	Estimate.	Actual.
1. Administration	$143,165 00	$127,189 65
2. Faculty of Arts	291,669 00	283,510 68
3. " Medicine	85,694 00	78,986 87
4. " Applied Science	143,352 00	135,567 31
5. " Household Science	17,105 00	16,622 25
6. " Education	68,225 00	68,054 48
7. " Forestry	12,500 00	11,438 32
8. University Extension and Social Service	8,575 00	8,252 82

Expenditures.—Continued.

9. Residences and Dining Hall	54,275 00	52,636 54
10. Royal Ontario Museum	17,500 00	14,412 82
11. Central Power Plant	46,500 00	42,238 77
12. Contingencies	5,000 00	1,780 33
13. Capital Account Charges	73,918 00	71,668 11
Total as per Appendix III	$967,478 00	$912,358 95
Interest written to Trust Funds (Schedules 2, 3 and 4*a*)	7,000 00	7,808 23
Interest on overdraft at Canadian Bank of Commerce	4,000 00	.....
	$978,478 00	$920,167 18
Receipts as above	872,420 00	864,678 29
Expenditure in excess of receipts	$106,058 00	$55,488 89

SCHEDULE 6.

Site Lands, Buildings and Contents, 30 June, 1916.

Site Lands:		
2,666,220 sq. feet at forty cents per foot	$1,066,488 00	
160,083 sq. feet at cost price	141,548 00	
2,826,303 sq. feet		$1,208,036 00
Buildings:		
Household Science building	$455,000 00	
Main building	450,000 00	
Chemistry and Mining, with adjacent building	384,736 89	
Physics building	363,945 85	
Library building	327,425 50	
Convocation Hall and Examination Wing	214,866 22	
Education building	184,383 47	
Pathological building	169,694 38	
Medical building	165,000 00	
Biological building	129,745 30	
Thermodynamics building	119,017 21	
Chemical building	77,469 88	
Engineering building	50,000 00	
Forestry building	30,101 65	
Goedetic Observatory building	12,000 27	
Social Service building	7,500 00	
Men's Residences	170,000 00	
Women's Residences	67,730 62	
University College Women's Union	13,747 89	
Y. M. C. A. building	1 00	
	$3,392,366 13	
Less balances of purchase money yet due on Social Service building and Women's Residence, 184 College Street	11,750 00	
		3,380,616 13
Library	$213,384 90	
Museum Specimens	1 00	
Convocation Hall Organ	19,603 11	
		232,989 01
Departmental Equipment:		
1. Faculty of Arts:		
Physics	$29,250 00	
Chemistry	14,040 00	
Physiology	12,500 00	
Mineralogy	10,145 00	
Geology	7,505 00	
Biology	6,131 25	
Botany	5,500 00	
Psychology	2,700 00	
Astro-Physics	1,635 00	
Mechanics	750 00	
Mathematics	500 00	

Site Lands, Buildings and Contents, 30 *June*, 1916.—Continued.

2. Faculty of Medicine:		
Pathology	18,440 56	
Chemical Pathology	7,925 74	
Pharmacology	2,430 00	
Anatomy	1,340 00	
3. Faculty of Applied Science:		
Electrical Engineering	30,923 00	
Mining	16,270 00	
Surveying	12,980 00	
Architecture and Drawing	10,830 00	
Applied Chemistry	10,114 00	
Applied Mechanics	10,075 00	
Thermodynamics and Hydraulics	10,000 00	
Physics and Photography	4,127 00	
4. Faculty of Household Science	19,000 00	
5. Faculty of Education	10,000 00	
		255,111 55
Furniture and Furnishings:		
Men's Residences	$14,266 30	
Women's Residences	4,935 42	
General furniture, various buildings	11,825 00	
		31,026 72
Athletic Field Stadium and equipment		22,267 35
Gymnasium equipment		1,800 00
Dining Hall equipment		1 00
Printing Plant		1 00
Antitoxin Laboratory Plant		1 00
Central Power Plant		397,898 50
Total valuation		$5,529,748 26
Return of 30 June, 1915		$5,521,899 57
Additions thereto:		
Cost price of building No. 8 Queen's Park, including surrender of lease, payable in ten annual instalments of $750 each, without interest, commencing July, 1915, now transferred to use as Social Service building	$7,500 00	
Valuation of Lot 5 and part Lot 4, University Park, formerly leased to Shoenberger Estate, 19,613 sq. feet at 40c. ($7,845.20, of which $2,720 transferred from Schedule 8)	7,845 20	
Cost price of building thereon (No. 184 College Street), including surrender of lease, payable in ten annual instalments of $500 each, without interest, commencing July, 1916 $5,000 00		
Expended on alterations during 1915-16 1,748 03		
Added to Women's Residence Buildings	6,748 03	
Valuation hitherto attached to house No. 85 St. George Street carried in accounts under Men's Residences, now transferred from that use to University College Women's Union $13,521 18		
Expended on alterations during 1915-16 226 71		
	13,747 89	
Antitoxin Laboratory Plant, transferred to Asset Account at value of $1.00, to which Capital Expenditure reduced out of profits	1 00	
	$35,842 12	
Less balances of purchase moneys still due to Wardrop and Shoenberger Estates	11,750 00	
		24,092 12
		$5,545,991 69

Site Lands, Buildings and Contents, 30 June, 1916.—Continued.

Contra.

Men's Residence Buildings:			
Transfer to University College Women's Union as above....		$13,521 18	
Women's Residence Furnishings:			
Written off by application of amount received during year from sales of wild lands set apart for Women's Residences		686 75	
Library proper:			
Fund of 30 June, 1915	$215,420 40		
Additions, 1915-16	4,564 03		
	$219,984 43		
Depreciation at 3%	6,599 53		
Difference between additions and depreciation written off		2,035 50	
			16,243 43
Return of 30 June, 1916			$5,529,748 26

SCHEDULE 7.

Unproductive Lands.

Vacant Land in Port Hope	$8,445 00	
Vacant Land in Belleville	1,283 00	
Endowment Lands unsold in various Townships	152 00	
U. C. C. Block on King Street	49,904 29	
		$59,784 29

Transactions, 1915-16.

Upper Canada College Block:		
Taxes paid for 1915 *re* widening of Duncan Street	$21 00	
Return of 30 June, 1915	59,763 29	
Return of 30 June, 1916		$59,784 29

SCHEDULE 8.

Leased Properties.

Victoria College Site		$1 00	
Knox College Site		4,714 40	
Wycliffe College Site		22,000 00	
Land leased to City of Toronto		120,000 00	
Park Land leased		305,738 00	
Toronto Business Properties		61,400 00	
Caradoc Farm		2,700 00	
			$516,553 40
House and land, 47 St. George Street		$10,172 95	
House and land, 69 St. George Street		20,000 00	
Building, No. 8 University Crescent		14,842 75	
Building, No. 719 Spadina Avenue		4,000 00	
Building, No. 721 Spadina Avenue		4,023 51	
			$53,039 21
Rentals accrued, but not due	$8,919 37		
Less paid in advance	1,150 00		
		$7,769 37	
City of Toronto payment accrued		1,500 00	
Wycliffe College pavement		571 92	
			9,841 29
			$579,433 90

Leased Properties.—Continued.

Return of 30 June, 1915		$579,209 27	
Addition to capitalized value upon renewal of lease of parts Lots 1 and 2, University Park		4,250 00	
		$583,459 27	
Less:			
Valuation attached to Lots 5 and part 4 (lease surrendered) transferred to Site Lands Account	$2,720 00		
Decrease in rentals outstanding	1,305 37		
		4,025 37	
			$579,433 90

SCHEDULE 9.

Investments, 30 June, 1916.

Debentures and Municipal Bonds		$244,981 54	
Interest accrued but not due	$4,803 93		
Less interest paid in advance	299 62		
		4,504 31	
			$249,485 85
Loans secured by mortgages on real property		$17,541 79	
Interest accrued but not due		195 37	
			17,737 16
Unpaid purchase money upon land sales		$25,850 00	
Interest accrued but not due		389 05	
			26,239 05
Dominion Power and Transmission Co., shares			2,000 00
Advance to Royal Ontario Museum Board for salaries and expenses for the year 1915-16		$28,825 64	
Less University's share charged to Revenue		14,412 82	
Payable by Provincial Government			14,412 82
Balance of grant towards Faculty of Education for 1915-16, due by Provincial Government			9,000 00
Accounts Receivable:			
University Press		$3,493 99	
Department of Photography		37 78	
Antitoxin Laboratory		14,108 19	
Miscellaneous labor and material		592 61	
			18,232 57
Central Power Plant:			
Amount outstanding in Accounts Receivable on 30 June, 1915		$27,846 27	
Receipts on account thereof during 1915-16		17,977 41	
		$9,868 86	
Victoria College Account:			
Share of operating expenses, 1915-16	$5,776 88		
Interest, sinking fund and rental charges	3,218 72		
		8,995 60	
Wycliffe College Account:			
Share of operating expenses, 1915-16	$2,480 44		
Interest, sinking fund and rental charges	543 12		
		3,023 56	
Knox College Account:			
Share of operating expenses, 1915-16	$2,994 55		
Interest, sinking fund and rental charges	1,475 30		
		4,469 85	
			26,357 87
Canadian Bank of Commerce, on deposit			116,942 26
			$480,407 58

Transactions, 1915-16.

Inwards.

Debenture collections	$16,716 49	
Mortgage loans repaid	945 86	
Purchase money collections	8,100 00	
Withdrawals from Canadian Bank of Commerce	1,070,772 21	
Decrease in accrued revenue	643 02	
		$1,097,177 58

Outwards.

Debentures purchased	$183 20	
Land Sale	100 00	
Grant due by Provincial Government	9,000 00	
Deposits in Canadian Bank of Commerce	1,282,073 51	
Increase in accounts outstanding	1,883 81	
		1,293,240 52
		$196,062 94
Return of 30 June, 1915		284,344 64
Return of 30 June, 1916		$480,407 58

APPENDIX II.

Fees, 1915-16.

Total of fees collected, 1915-16			$232,790 85
Less:			
Sundry refunds during year		$2,266 50	
Paid to Students' Administrative Council, Council fees		3,102 00	
Paid to Education Department for their share of Matriculation fees		1,394 00	
Paid to Instructors in Summer Classes in Medicine, fees derived		622 00	
Paid to Hospitals, fees payable from Students in Medicine:			
Toronto General	$3,825 00		
St. Michael's	895 00		
Sick Children's	830 00		
Western	175 00		
		5,725 00	
Paid to Hamilton Conservatory of Music, *re* Local Examination Candidates from that centre		60 00	
Transferred to Microscopes Account		120 00	
Fees paid in advance for 1916-17, carried forward		2,960 00	
			16,249 50
			$216,541 35
Carried to Organ Fund (Schedule 5*a*), being surplus fees derived from Local Examinations in Music after payment of expenses			$1,228 80
Balance to Revenue Account (Schedule 5*b*)			215,312 55
			$216,541 35

Details of Fees Received, 1915-16.

Subject.	1st year.	2nd year.	3rd year.	4th year.	5th year.	6th year.	Miscellaneous.	Total.
I. Faculty of Arts:	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Tuition	10,940 00	8,032 00	6,170 00	6,299 00	.....	.....	952 00	32,393 00
Dispensations (University College)	10 00	30 00	10 00	10 00	.....	.....	.....	60 00
Dispensations (University)	15 00	35 00	25 00	10 00	.....	.....	.....	85 00
Honor Certificates	1 00	1 00	1 00	7 00	.....	.....	74 00	84 00
Matriculation	5 00	.....	.....	.....	.....	.....	827 00	832 00
Ad Eundem	.....	65 00	10 00	20 00	.....	.....	.....	95 00
Examinations	4,882 44	4,587 56	4,245 00	3,772 50	.....	.....	708 00	18,195 50
Degrees	.....	.....	.....	2,760 00	.....	.....	10 00	2,770 00
Laboratory Supplies	355 00	523 00	774 00	970 00	.....	.....	9 00	2,631 00
Library	1,003 00	670 00	596 00	568 00	.....	.....	12 00	2,849 00
Gymnasium, Men's (including lockers)	44 00	16 00	12 00	8 00	.....	.....	28 00	108 00
Gymnasium, Women's (including lockers)	400 00	228 00	244 00	128 00	.....	.....	116 75	1,116 75
Penalties (University)	42 00	32 00	28 00	33 00	.....	.....	10 00	145 00
Penalties (University College)	58 50	97 50	102 00	79 50	.....	.....	18 00	355 50
	17,755 94	14,317 06	12,217 00	14,665 00	.....	.....	2,764 75	61,719 75
II. Faculty of Medicine:								
Tuition	15,422 00	11,090 00	9,595 00	7,598 00	10,886 09	.....	1,710 00	56,301 00
Honor Certificates	.....	.....	.....	.....	.....	.....	11 00	11 00
Matriculation	15 00	.....	.....	.....	.....	.....	.....	15 00
Ad Eundem	.....	.....	.....	.....	10 00	.....	.....	10 00
Examinations	1,390 00	1,230 00	1,070 00	760 00	1,030 00	.....	160 00	5,640 00
Degrees	.....	.....	.....	.....	1,900 00	.....	.....	1,900 00
Laboratory Supplies	1,096 00	1,177 00	279 00	568 00	475 00	.....	.....	3,595 00
Library	274 00	214 00	186 00	142 00	190 00	.....	.....	1,006 00
Gymnasium, (including lockers)	.....	8 00	8 00	4 00	.....	.....	.....	20 00
Penalties	27 00	29 00	46 00	63 00	102 00	.....	1 00	268 00
	18,224 00	13,748 00	11,184 00	9,135 00	14,593 00	.....	1,882 00	68,766 00

Details of Fees Received, 1915-16—Continued.

Subject.	1st year.	2nd year.	3rd year.	4th year.	5th year.	6th year.	Miscellaneous.	Total.
III. Faculty of Applied Science:	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Tuition	8,259 10	7,118 00	8,357 00	7,360 00				31,094 10
Matriculation	5 00							5 00
Examinations	1,010 00	1,050 00	980 00	880 00			60 00	3,980 00
Degrees				610 00			110 00	720 00
Ad Eundem			10 00					10 00
Library	200 00	166 00	156 00	128 00				650 00
Gymnasium	4 00	12 00						16 00
Penalties	14 00	31 00	44 00	41 00				130 00
	9,492 10	8,377 00	9,547 00	9,019 00			170 00	36,605 10
IV. Faculty of Household Science:								
Tuition and Class Material							1,008 00	1,008 00
Special Course, Departmental Certificates							775 00	775 00
Library							2 00	2 00
Gymnasium							36 00	36 00
							1,821 00	1,821 00
V. Faculty of Education:								
Tuition (Teachers in training)							7,649 00	7,649 00
Dispensation from teaching in Province of Ontario							200 00	200 00
Examinations							487 00	487 00
Honor Certificates							5 00	5 00
Degrees							25 00	25 00
Gymnasium, Men's							4 00	4 00
" Women's							8 00	8 00
							8,378 00	8,378 00
University Schools:								
Tuition							23,106 50	23,106 50
							31,484 50	31,484 50
VI. Faculty of Forestry:								
Tuition	36 00	350 00	216 00	306 00	54 00			962 00
Examinations	10 00	120 00	60 00	90 00	10 00			290 00
Laboratory Supplies	8 00	70 00	48 00	60 00	4 00			190 00
Library	2 00	18 00	12 00	16 00	2 00			50 00
Degrees				70 00				70 00
Penalties	10 00	12 00	7 00	26 00				55 00
	66 00	570 00	343 00	568 00	70 00			1,617 00
VII. University Extension and Social Service:								
Summer Session, Lecture fees (accrual 1916)							468 00	468 00
Correspondence Courses							849 50	849 50
							1,317 50	1,317 50
Social Service:								
Lecture fees							1,597 50	1,597 50
Gymnasium (Women's)							20 00	20 00
							2,935 00	2,935 00

Details of Fees Received, 1915-16.—Continued.

VIII. Departmental Fees.	Post Graduate Studies.	Law.	Dentistry.	Music. Mus. Bac.	Music. Local.	Pharmacy.	Veterinary Science.	Agriculture.	Total.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Tuition (including Registration)	75 00	.....	.....	.....	.....	.....	3,200 00	.....	3,275 00
Matriculation	.....	40 00	450 00	.....	.....	190 00	40 00	.....	720 00
Examinations	340 00	210 00	970 00	110 00	1,919 00	456 00	150 00	560 00	4,715 00
Degrees	460 00	180 00	705 00	50 00	.....	360 00	105 00	500 00	2,360 00
Honor Certificates	.....	.....	.....	.....	498 00	.....	.....	.....	498 00
Ad Eundem	.....	.....	25 00	.....	.....	.....	.....	.....	25 00
	875 00	430 00	2,150 00	160 00	2,417 00	1,006 00	3,495 00	1,060 00	11,593 00

Summary of Fees, 1915-16.

I. Faculty of Arts:		
First year	$17,755 94	
Second year	14,317 06	
Third year	12,217 00	
Fourth year	14,665 00	
Miscellaneous	2,764 75	
		$61,719 75
II. Faculty of Medicine:		
First year	$18,224 00	
Second year	13,748 00	
Third year	11,184 00	
Fourth year	9,135 00	
Fifth year	14,593 00	
Miscellaneous	1,882 00	
		68 766 00
III. Faculty of Applied Science:		
First year	$9,492 10	
Second year	8,377 00	
Third year	9,547 00	
Fourth year	9,019 00	
Miscellaneous	170 00	
		36,605 10
IV. Faculty of Household Science:		
Miscellaneous	$1,821 00	
		1,821 00
V. Faculty of Education:		
Teachers in training	$8,378 00	
University Schools	23,106 50	
		31,484 50
VI. Faculty of Forestry:		
First year	$66 00	
Second year	570 00	
Third year	343 00	
Fourth year	568 00	
Sixth year	70 00	
		1,617 00
VII. University Extension and Social Service:		
Miscellaneous	$2,935 00	
		2,935 00

Summary of Fees, 1915-16.—Continued.

VIII. Departmental:		
Post Graduate Studies	$875 00	
Law	430 00	
Dentistry	2,150 00	
Music	2,577 00	
Pharmacy	1,006 00	
Veterinary Science	3,495 00	
Agriculture	1,060 00	
		11,593 00
		$216,541 35

Classification of Services.

Tuition Fees:		
Arts	$32,393 00	
Medicine	56,301 00	
Applied Science	31,094 10	
Household Science	1,783 00	
Education, Teachers in Training	7,649 00	
Education, University Schools	23,106 50	
Forestry	962 00	
Departmental	3,275 00	
Dispensations	345 00	
Honor Certificates	598 00	
Matriculation	1,572 00	
Ad Eundem	140 00	
Examinations	33,307 50	
Degrees	7,845 00	
Laboratory Supplies	6,416 00	
Library	4,557 00	
Gymnasium	1,328 75	
University Extension and Social Service	2,915 00	
Penalties	953 50	
		$216,541 35

Recapitulation.

University Fees proper	$60,077 75	
University College Fees proper	32,453 00	
Medicine	56,301 00	
Applied Science	31,094 10	
Household Science	1,783 00	
Education, including University Schools	30,955 50	
Forestry	962 00	
University Extension and Social Service	2,915 00	
		$216,541 35

APPENDIX III.

Revenue Expenditures, 1915-16.

	Appropriation.	Supplementary.	Unused.	Total.
I. Administration:				
1. Salaries	$65,370 00	$439 28		$65,809 28
2. Pensions	5,500 00			5,500 00
3. President's Office	250 00		44	249 56
4. Bursar's Office	2,000 00		20 03	1,979 97
5. Registrar's Office	4,125 00		377 88	3,747 12
6. Superintendent's Office	650 00		19 45	630 55
7. Library	11,695 00		5,094 57	6,600 43
8. Museum	.....			.....
9. Gymnasium and Students' Union	5,875 00		818 35	5,056 65
10. Convocation Hall	2,200 00		567 37	1,632 63
11. Grounds	11,750 00		2,011 06	9,738 94
12. Examinations	15,000 00		4,551 10	10,448 90
13. Convocation Expenses	1,000 00		609 30	390 70
14. Receptions	1,000 00		742 31	257 69
15. Telephones	2,900 00		70 29	2,829 71
16. Insurance	8,000 00		355 96	7,644 04
17. Advertising	1,250 00		151 30	1,098 70
18. Aid to Publications and Societies	1,200 00		350 00	850 00
19. University Studies	1,200 00		29 28	1,170 72
20. Law Costs	600 00		349 04	250 96
21. General Incidentals	1,600 00		296 90	1,303 10
22. Senate Elections	.....			.....
	$143,165 00	$439 28	$16,414 63	$127,189 65
II. Faculty of Arts:				
23. Salaries	$255,274 00		$3,465 28	$251,808 72
24. Retiring Allowances	2,750 00			2,750 00
25. Main Building	8,225 00		1,351 05	6,873 95
26. Biological Building and Department	5,535 00		924 77	4,610 23
27. Sub-Department of Botany	2,625 00	20 66		2,645 66
28. Dept. of Bio-Chemistry	1,100 00		51 40	1,048 60
29. Physiological Department	1,350 00		4 01	1,345 99
30. Chemical Building and Dept.	2,920 00		154 44	2,765 56
31. Sub-Department of Physical Chemistry	300 00	4 22		304 22
32. Physics Building and Department	7,475 00		531 22	6,943 78
33. Sub-Department of Astro-Physics	750 00		65 20	684 80
34. Geological Department	400 00		193 81	206 19
35. Mineralogical Department	500 00		277 12	222 88
36. Psychological Department	450 00		175 12	274 88
37. Mathematical Department	35 00		10 75	24 25
38. Sub-Department of Mechanics	100 00		86 51	13 49
39. Political Science	75 00		40 40	34 60
40. History	50 00		17 54	32 46
41. Italian and Spanish	25 00		23 75	1 25
42. University College Departments	930 00		478 11	451 89
43. World History	50 00		50 00	.....
44. Trinity College Service	750 00		282 72	467 28
45. University Extension and Social Service (see VIII)				
	$291,669 00	$24 88	$8,183 20	$283,510 68

Revenue Expenditures, 1915-16.—Continued.

	Appropriation.	Supplementary.	Unused.	Total.
III. Faculty of Medicine:				
46. Salaries	$65,539 00	$861 74		$66,400 74
47. Retiring Allowances	500 00			500 00
48. Anatomy	2,600 00		843 73	1,756 27
49. Pathology and Bacteriology.	1,400 00		491 52	908 48
50. Chemical Pathology	750 00	353 15		1,103 15
51. Pharmacy and Pharmacology	480 00		182 51	297 49
52. Medicine	200 00		102 31	97 69
53. Surgery	300 00		278 58	21 42
54. and 55. Obstetrics and Gynaecology	250 00		79 54	170 46
56. Ophthalmology	200 00		140 00	60 00
57. Oto-Laryngology	100 00		83 90	16 10
58. Therapeutics	50 00	1 30		51 30
59. Hygiene	650 00		105 41	544 59
60. Medical Jurisprudence	50 00		50 00	.....
61. Medical Building	3,525 00		281 09	3,243 91
62. Pathological Building	6,650 00		4,525 59	2,124 41
63. General Expenses	2,450 00		759 14	1,690 86
	$85,694 00	$1,216 19	$7,923 32	$78,986 87
IV. Faculty of Applied Science:				
64. Salaries	$116,670 00		$3,058 63	$113,611 37
65. C. & M. Building	5,450 00		404 99	5,045 01
66. Engineering Building	3,937 00		781 98	3,155 02
67. Thermodynamics Building.	1,625 00		276 11	1,348 89
68. Geodetic Observatory Building	380 00		64 60	315 40
69. Electrical Engineering	2,720 00		18 86	2,701 14
70. Mechanical Engineering	1,850 00		561 39	1,288 61
71. Applied Mechanics	600 00		8 04	591 96
72. Mining Engineering	1,200 00		26 95	1,173 05
73. Metallurgical Engineering.	1,750 00		964 20	785 80
74. Ferro-Metallurgy	75 00		75 00	.....
75. Surveying	350 00		60 42	289 58
76. Applied Chemistry	1,400 00		72 23	1,327 77
77. Electro-Chemistry	1,200 00		50 51	1,149 49
78. Architecture and Drawing.	985 00		415 32	569 68
79. Engineering Physics and Photography	1,910 00		493 22	1,416 78
80. General Expenses	1,250 00		452 24	797 76
	$143,352 00		$7,784 69	$135,567 31
V. Faculty of Household Science:				
81. Salaries	$10,900 00			$10,900 00
82. Household Science Building and Department	6,205 00		$482 75	5,722 25
	$17,105 00		$482 75	$16,622 25
VI. Faculty of Education:				
83. Salaries	$53,275 00	$1,158 32		$54,433 32
84. Education Building and Department	14,950 00		$1,328 84	13,621 16
	$68,225 00	$1,158 32	$1,328 84	$68,054 48

Revenue Expenditures, 1915-16.—Continued.

	Appropriation.	Supplementary.	Unused.	Total.
VII. Faculty of Forestry:				
85. Salaries	$9,350 00			$9,350 00
86. Forestry Building and Department	3,150 00		$1,061 68	2,088 32
	$12,500 00		$1,061 68	$11,438 32
VIII. University Extension and Social Service:				
87. University Extension	$4,050 00		$260 81	$3,789 19
88. Social Service Building and Department	4,525 00		61 37	4,463 63
	$8,575 00		$322 18	$8,252 82
IX. Residences and Dining Hall:				
89. Men's Residences	$7,025 00		$910 43	$6,114 57
90. Women's Residences	16,000 00		403 78	15,596 22
91. Dining Hall	31,250 00		324 25	30,925 75
	$54,275 00		$1,638 46	$52,636 54
X. 92. Royal Ontario Museum	$17,500 00		$3,087 18	$14,412 82
XI. 93. Central Light, Heat and Power Plant	$46,500 00		$4,261 23	$42,238 77
XII. 94. Contingencies	$5,000 00		$3,219 67	$1,780 33
XIII. 95. Capital Account Charges	$73,918 00		$2,249 89	$71,668 11

Recapitulation.

I. Administration	$143,165 00	$439 28	$16,414 63	$127,189 65
II. Faculty of Arts	291,669 00	24 88	8,183 20	283,510 68
III. Faculty of Medicine	85,694 00	1,216 19	7,923 32	78,986 87
IV. Faculty of Applied Science	143,352 00		7,784 69	135,567 31
V. Faculty of Household Science	17,105 00		482 75	16,622 25
VI. Faculty of Education	68,225 00	1,158 32	1,328 84	68,054 48
VII. Faculty of Forestry	12,500 00		1,061 68	11,438 32
VIII. University Extension and Social Service	8,575 00		322 18	8,252 82
IX. Residences and Dining Hall	54,275 00		1,638 46	52,636 54
X. Royal Ontario Museum	17,500 00		3,087 18	14,412 82
XI. Central Light, Heat and Power Plant	46,500 00		4,261 23	42,238 77
XII. Contingencies	5,000 00		3,219 67	1,780 33
XIII. Capital Account Charges	73,918 00		2,249 89	71,668 11
	$967,478 00	$2,838 67	$57,957 72	$912,358 95
			2,838 67	
			$55,119 05	
	55,119 05			
Total Expenditure under appropriations	$912,358 95			

I. Administration.

1. *Salaries.*

President's Office.

Dr. R. A. Falconer, President, 12 mos. to 30th June	$8,000 00	
Miss A. W. Patterson, President's Secretary, 12 mos. to 30th June	1,300 00	
		$9,300 00

Bursar's Office.

F. A. Mouré, Bursar, 12 mos. to 30th June	$3,700 00	
W. R. Hamilton, Accountant, 12 mos. to 30th June	1,200 00	
H. J. Bolitho, Fees Clerk, 12 mos. to 30th June	1,700 00	
Miss A. M. Gall, Clerk and Stenographer, 12 mos. to 30th June	950 00	
Miss K. W. Huntington, Voucher Clerk, 12 mos. to 30th June...	850 00	
C. E. Higginbottom, Office Assistant, 12 mos. to 30th June....	700 00	
Miss E. B. Goodwin, Clerk and Stenographer, 12 mos. to 30th June	600 00	
J. P. Jones, Clerk, at $550 to 31st Oct., $183.33; war service, half pay, from 1st Nov., $183.33	366 66	
W. W. Macdonald, Clerk, 6th Nov. to 31st Dec., at $10 a week, $80; to 30th June, at $550 per annum, $275	355 00	
		10,421 66

Registrar's Office.

J. Brebner, Registrar, 12 mos. to 30th June	$3,200 00	
A. B. Fennell, Assistant Registrar and Secretary to Residence Committee, at $1,600, to 31st Dec., $800; war service, half pay, from 1st Jan., $400	1,200 00	
A. T Laidlaw, Assistant, 9½ mos. from 15th Sept., at $1,500 per annum	1,187 50	
Miss E. M. Dickson, Clerk, 12 mos. to 30th June	900 00	
Miss N. MacKenzie, Minute Clerk, 12 mos. to 30th June, $700; bonus for extra services, $50	750 00	
Stenographers, each 12 mos. to 30th June:		
Miss M. McMillan	700 00	
Miss A. S. Meen	700 00	
Miss E. M. Sharpe	600 00	
Miss J. R. White	600 00	
Miss I. G. O'Neil, Clerk, 12 mos. to 30th June	550 00	
		10,387 50

Superintendent's Office.

G. Campbell, Superintendent of Buildings and Grounds, 12 mos. to 30th June	$1,600 00	
A. D. LePan, Joint Superintendent, 12 mos. to 30th June	2,600 00	
W. H. Bonus, Assistant Superintendent, 8 mos. from 1st Nov., at $1,200 per annum	800 00	
B. H. Dickson, Clerk, 1st July to 30th Oct., at $11 per week....	192 50	
C. R. Hall, Clerk, 28th Sept. to 4th Nov., at $9 a week	48 00	
E. A. Ridge, Clerk, 9th Nov. to 30th June, at $45 a mo.	402 99	
Stenographers, each 12 mos. to 30th June:		
Miss Ada Kidd	675 00	
Miss G. Hagen	675 00	
Clerk:		
W. S. Baker, 1st July to 14th Aug., at $5 a week	25 00	
G. McGillivray, 7th to 21st Oct., at $7.50 a week	15 00	
T. A. Evans, 8th Nov. to 15th Feb., at $7 a week	100 35	
C. E. Ellis, 20th to 28th Feb., at $8 a week	9 33	
Miss M. Lundy, 20th March to 31st May, at $7 a week, $74.67; 1st to 30th June, at $8.50 a week, $34	108 67	
		7,251 84

1. *Salaries.*—Continued.

Library.

H. H. Langton, Librarian, 12 mos. to 30th June	$3,200 00	
Miss G. Buchan, First Assistant, 12 mos. to 30th June	1,100 00	
Assistants, each 12 mos. to 30th June:		
Miss E. Creighton	800 00	
Miss H. Fairbairn	800 00	
Miss G. Cayley	700 00	
Miss J. Forrest (resigned)	700 00	
Mrs. A. C. Jones	700 00	
Miss H. G. B. Woolryche	700 00	
Miss A. H. Young, Cataloguer, 12 mos. to 30th June	1,100 00	
Assistant Cataloguers:		
Miss E. V. Bethune, 12 mos. to 30th June	800 00	
Miss M. E. L. Thompson, at $700, resigned 15th April	554 17	
Miss I. Edwards, 15th April to 30th June, at $50 a mo.	125 00	
Miss A. E. Stennett, 15th to 30th June, at $700 per annum	29 17	
Typewriting Assistant to Cataloguers:		
Miss E. Aldridge, 1 mo. to 31st July, at $600 per annum (appointment temporarily discontinued)	50 00	
Miss M. Murphy, 21st Oct. to 30th June, at $50 a month (substitute)	415 00	
Miss L. M. Mason, Order and Accession Clerk, 12 mos. to 30th June	900 00	
Delivery Clerks:		
Miss M. L. Newton, 12 mos. to 30th June	600 00	
Miss M. Lowe (resigned), 12 mos. to 30th June, $600; half month to date of resignation, paid in June, $25	625 00	
S. H. Fussell, Attendant (with rooms, heat and light as Caretaker of building), 12 mos. to 30th June	700 00	
		14,598 34

Museum.

C. T. Currelly, Director of Archaelogical Museum, 12 mos. to 30th June	$3,000 00	
		$3,000 00

Gymnasium.

J. W. Barton, Physical Director, 12 mos. to 30th June	$2,300 00	
T. A. Reed, Financial Secretary to Athletic Directorate, 12 mos. to 30th June (charged to receipts from Athletic Field)	1,800 00	
A. Williams, Instructor, 12 mos. to 30th June	1,100 00	
		$5,200 00

General Service.

R. Martin, Bedel, 12 mos. to 30th June	$1,220 00	
W. H. Fox, Mechanician, at $1,150, war service, half salary paid to wife	575 00	
E. F. McKee, substitute, 939¼ hrs. at 45c.	422 71	
Constables:		
J. Christie, at $1,100, war service, part salary paid to wife, $400; allowance credited towards pension fund for year, $100	500 00	
W. May, substitute, 12 mos. to 30th June	700 00	
D. Forbes, 12 mos. to 30th June	750 00	
Nightwatchmen:		
D. Black, 12 mos. to 30th June	725 00	
H. McIntosh, 12 mos. to 30th June	725 00	
W. Sims, 12 mos. to 30th June	700 00	
J. Adams, 1st July to 27th Sept., at $700 per annum	169 19	
W. Greenwood, 28th Sept. to 30th June, at $55 per month	500 50	
Occasional service, relieving, etc.:		
J. Prattis, $390.88; W. G. Clarke, $53.33; A. H. Wicks, $18.33	462 54	

1. *Salaries.*—Continued.

Secretary to Students' Administrative Council (charged to fees):			
H. S. Hayes, 1 mo. to 31st July		100 00	
C. C. Grant, 1st Oct. to 30th June, at $75 per month		675 00	
			$8,224 94
			$68,384 28
Less charged to Athletic Field receipts	$1,800 00		
" " Fees	775 00		2,575 00
			$65,809 28

2. *Pensions.*

James Loudon, LL.D., annual pension	$5,500 00	
		$5,500 00

3. *President's Office.*

Office supplies, postage, printing and incidentals ($249.56):		
Wm. Briggs, printing report	$96 00	
President R. A. Falconer, petty disbursements	43 56	
Office Specialty Co., filing cases	2 10	
University Press, printing and stationery	107 90	
		$249 56

4. *Bursar's Office.*

Office supplies, postage, printing and incidentals ($1,479.97):		
Burroughes' Adding Machine Co., inspection and supplies	$11 65	
The Bursar, petty disbursements, $91.43; postage, $220.00, Inland Revenue stamps, $195.00	506 43	
Elliott-Fisher, ribbons, etc.	2 85	
Grand & Toy, cheque books, etc.	101 80	
T. L. Jones, 2 weeks' clerical assistance at $10.00 per week	20 00	
W. W. MacDonald, 6 weeks' clerical assistance at $10.00 per week	60 00	
C. W. Mack, rubber stamps	1 35	
Might Directories, city directory	10 00	
Moir & Warren, transfer cases	37 60	
Students' Book Dept., almanacs	2 35	
United Typewriter Co., transfer cases and supplies, $41.43; typewriter, $110.00, less allowance on old machine, $25.00, $85.00	126 43	
University Dining Hall, occasional meals to clerks during work on annual report	11 70	
University Press, printing, stationery and supplies	584 51	
Superintendent's Dept., mats	3 30	
Auditor's remuneration, ($500.00):		
Estate of the late W. H. Cross and Geoffrey T. Clarkson	500 00	
		$1,979 97

5. *Registrar's Office.*

Office supplies and stationery ($551.45):	
Grand & Toy, cards	$2 60
Lowe-Martin Co., cards	26 00
Might Directories, city directory	10 00
National Typewriter Co., inspection and repairs	14 00
Office Specialty Mfg. Co., cabinet and supplies	35 96
Students' Book Dept., almanac	80
United Typewriter Co., repairs	9 35
University Press, stationery and supplies	435 00
Superintendent's Dept., labour, $7.19; material, $10.55	17 74
Postage ($1,100.00):	
The Bursar, postage supplied	1,100 00

5. *Registrar's Office.*—Continued.

Printing, other than Calendar ($201.15):			
University Press, printing		201 15	
Printing Calendar and Curricula ($1,862.60):			
University Press, printing	$1,877 60		
Less received for advertising in Curricula	15 00		
		1,862 60	
Newspaper announcements re Graduates on Active Service ($31.92):			
Evening Telegram		2 00	
Edmonton Journal		1 00	
Globe Printing Co.		1 86	
Mail and Empire		8 40	
News Publishing Co.		1 86	
Toronto Daily Star		8 40	
Toronto World		8 40	
			$3,747 12

6. *Superintendent's Office.*

Office supplies, postage, printing and incidentals ($630.55):			
T. W. Betteridge, draughting		$2 50	
The Bursar, postage supplied		136 00	
Canada Stamp and Stencil Co., stamps		4 58	
Copeland-Chatterson Co., ledger sheets		43 52	
E. Dietzgen & Co., tracing linen		6 59	
Evening Telegram, advertisements for office help		3 20	
Might Directories, city directory		10 00	
Office Specialty Mfg. Co., cabinet, filing cases and supplies		108 31	
Photography, Dept. of, prints		1 75	
Remington Typewriter Co., inspection		9 00	
United Typewriter Co., inspection		18 00	
University of Toronto Engineering Society, draughting instruments		12 75	
University Press, stationery and supplies		266 88	
Petty items (5)		5 23	
Superintendent's Dept., labour, $2.68; material, $1.76		4 44	
		$632 75	
Less received from sale of plans		2 20	
			$630 55

7. *Library.*

(*a*) Maintenance of Building:			
Heat and Light (supplied from Central Power Plant):			
Gas ($23.10):			
Consumers' Gas Co.		$23 10	
Water ($60.01):			
City Treasurer		60 01	
Caretaker's supplies ($89.20):			
Superintendent's Dept., material		89 20	
Cleaning ($543.20):			
Allen Mfg. Co., laundry		2 59	
Canadian Cleaning Co., cleaning windows		24 10	
Ontario Laundry Co., laundry		2 63	
Superintendent's Dept., labour		513 88	
Repairs and Renewals ($776.67):			
Wm. Bartlett & Son, shades		3 63	
Wm. Card, exterminating rats		7 50	
City Treasurer, elevator license		5 00	
T. Eaton Co., cork carpet		31 85	
Forbes Roofing Co., repairs to roof		15 74	
Johnson Temperature Regulating Co. of Canada, repairs		4 45	
A. Matthews, repairs to roof		204 55	
Superintendent's Dept., labor, $285.86; materlal, $218.09		503 95	
			$1,492 18

7. *Library.*—Continued.

(*b*) General Library Appropriation:

Books and periodicals, binding and office supplies ($5,108.25):

American Academy of Political and Social Service	$5 05
American Association for Advancement of Science	3 55
American Association for Labour Legislation	5 03
American Ceramic Society	10 80
American Economic Association	5 05
American Institute of Electrical Engineers	5 81
American Institute of Mining Engineers	18 24
American Library Association	5 05
American Medical Association	6 58
American Society for Testing Materials	8 88
American Society of Civil Engineers	6 08
American Society of Mechanical Engineers	15 10
American Statistical Association	2 05
Annual Review Publishing Co.	4 00
Archæological Institute of America	8 38
H. S. Bardal	2 00
Boston Book Co.	8 56
Geo. Burnham, Jr.	5 05
C. D. Cazenove & Son	949 95
Central News Agency, Cape Town	11 07
Champlain Society	10 00
C. A. Chant	5 72
T. & T. Clark	5 59
Daily Telegraph Newspaper Co., Sydney, N.S.W.	14 60
Wm. Dawson & Son	298 91
A. DeCelles	4 00
B. E. Fernow	7 55
Orell Fussli	2 59
Gauthier-Villars	40 35
Geological Society of America	7 98
W. B. Gerish	2 68
Ginn & Co.	2 80
Glasgow, Brook & Co.	15 00
Hispanic Society of America	4 05
Johns Hopkins Press	11 22
Institute of Mining and Metallurgy	2 65
International Press	6 00
N. M. Judd	6 08
S. Lapi	4 92
Libreria Internazionale	87 90
Linnean Society of London	14 43
Rev. J. C. McMillan	3 77
Mississippi Valley Historical Association	2 05
N. F. Morrison	19 50
National Geographic Society	3 05
Thos. Nelson & Sons	20 12
New York Evening Post	10 08
New Zealand Times	12 65
Charles L. Parsons	5 05
Pioneer Press, Allahabad	22 12
Princeton University Press	6 08
Public Printing and Stationery Dept., Ottawa	3 00
Garcia Rico & Cie	20 15
The "School"	2 50
South African Mining Journal Syndicate	9 73
G. E. Stechert & Co.	120 91
Dr. E. L. Stevenson	10 27
Students' Book Dept.	1,453 86
Superintendent of Documents, Washington	9 67
The "Survey"	3 78
J. H. Tanner	5 05
J. Terquem	561 64
T. Fisher Unwin	2 25
University of Chicago Press	42 15

7. *Library.*—Continued.

University of Pennsylvania Museum	10 43	
Upper Canada Tract Society	6 00	
Warwick & York	3 03	
H. W. Wilson Co.	38 20	
Wistar Institute of Anatomy and Biology	76 90	
G. M. Wrong	3 00	
Sundry small accounts (8)	10 55	
The Bursar, postage supplied	183 00	
The Librarian, disbursements: book deposits refunded, $84.00; car tickets and sundries, $9.17; to be accounted for in 1916-17, $36.36=$129.53, less charged to previous year, $49.09	80 44	
Canada Stamp & Stencil Works, stamps	2 84	
C. Gripton, stamps	2 25	
Lowe-Martin Co., cards	7 74	
Might Directories, city directory	10 00	
Office Specialty Mfg. Co., tray	2 00	
Remington Typewriter Co., inspection	24 75	
United Typewriter Co., inspection, etc.	9 23	
University Press, binding, $779.73; printing and stationery, $191.07	970 80	
Petty items (5)	3 00	
Freight charges	38 30	
Superintendent's Dept., labour, $29.55; material, $28.20	57 75	
	$5,530 94	
Less graduates' deposits, $160.00; fines, $113.20; replacement of books lost, $24.24; subscription to and sales of books, etc., $12.86; freight refund, $10.79; American Forestry Association, item charged by error to this account in 1914-15, $20.00; contribution by Berlin High School Library Society towards library funds, $81.60	422 69	
		$5,108 25
		$6,600 43

9. *Gymnasium and Students' Union.*

(*a*) Maintenance of Building (temporary structure):		
Fuel ($532.58):		
Connell Anthracite Mining Co.	$532 58	
Water ($42.89):		
City Treasurer	42 89	
Caretaker's supplies ($8.10):		
Superintendent's Dept., material	8 10	
Cleaning ($264.78):		
Superintendent's Dept., labour	264 78	
Repairs and renewals ($202.48):		
Superintendent's Dept., labour, $137.85; material, $64.63	202 48	
	$1,050 83	
Less sundry credits: cleaning	1 00	
	$1,049 83	
Caretaker, Geo. Hare, 12 months to 30th June	800 00	
		$1,849 83
(*b*) Aid to Athletics:		
Grant to Athletic Association ($800.00):		
University Athletic Association	$800 00	
Gymnastic Appliances, etc. ($174.22):		
W. C. Avery, ammonia	1 70	
Wm. Cane, repairs to apparatus	24 00	
G. H. Corsan, water wings	19 20	
O. G. Niemeier, medical supplies	16 15	
Harold A. Wilson Co., apparatus	31 17	
Superintendent's Dept., material	82 00	

9. *Gymnasium and Students' Union.*—Continued.

Instruction in Swimming (including women students), ($1,000.00):		
G. H. Corsan, services as instructor	1,000 00	
Physical Instruction to Women Students ($1,232.60):		
Miss Ivy Coventry, instructress	800 00	
Dr. Helen MacMurchy, examiner	200 00	
Bell Piano Co., piano rental for classes	35 00	
Pianists' services:		
Miss Alma L. Levett	71 25	
Miss E. M. Goodman	5 50	
F. Hanmer, attendant at basketball practices,etc.,		
1914-15 account $15 25		
1915-16 account 21 75		
	37 00	
Women's Athletic Association, University College, disbursements:		
Harold A. Wilson Co., hockey sticks and tennis balls	8 75	
Torontonensis, 1916, Article *re* Athletic Team	15 50	
University of Toronto Athletic Association, hockey privileges, season 1915-16	25 00	
Miss V. E. Kennedy, Secretary, sundries	10 00	
Women's Athletic Association, Victoria College, disbursements:		
Acta Victoriana, insertion of picture	5 00	
J. Brotherton, hockey sticks and tennis balls	7 55	
J. Hewitson, lime	2 50	
Miss A. M. Hamill, Secretary, sundries	9 55	
		$3,206 82
		$5,056 65

10. *Convocation Hall.*

Heat and Light (supplied from Central Power Plant):		
Water ($20.34):		
City Treasurer	$20 34	
Caretaker's supplies ($104.69):		
Superintendent's Dept., material	104 69	
Cleaning ($541.46):		
Allen Mfg. Co., laundry	14	
Canadian Cleaning Co., cleaning windows	30 00	
Ontario Laundry Co., laundry	29	
Superintendent's Dept., labor	511 03	
Repairs and renewals ($601.91):		
Wm. Card, exterminating rats	7 50	
T. Eaton Co., tray and glasses	9 30	
Johnson Temperature Regulating Co. of Canada, repairs	1 80	
A. Matthews, repairs to roof	24 90	
R. Robertson & Sons, masonry	93 07	
Superintendent's Dept., labor, $312.18; material, $153.16	465 34	
	$1,268 40	
Caretaker, S. J. Apted, 12 months to 30th June (with house, heat and light)	600 00	
	$1,868 40	
Less amount received from societies (net)	235 77	
		$1,632 63

11. *Grounds.*

Labor, gravel, roadways, granolithic walks, flowers and shrubs ($7,629.21):		
Aikenhead Hardware, wheelbarrows, etc	$12 50	
Asphaltic Concrete Co., repairing roadway, $2,313.71, less charged in 1914-15, $1,850.00	463 71	
Britnell & Co., stone and cinders	10 37	
City Treasurer, water rates	5 00	

11. *Grounds.*—Continued.

Collett's Carriage Works, blacksmithing, etc	14 00	
Consumers' Gas Co., moving pipe *re* grading	3 66	
Crescent Concrete Paving Co., granolithic walks	440 30	
T. Eaton Co., harness	3 35	
H. T. Hadrill, teaming	136 83	
Hardware Co. of Toronto, lawn mowers	49 00	
A. M. Horn, trimming trees	280 92	
J. H. McCabe, fodder	73 77	
Geo. F. Martin, flowers	45 00	
Page Wire Fence Co., fencing	85 10	
Geo. Pearsall & Son, lawn mowers	40 80	
M. Rawlinson, teaming	16 80	
R. Robertson & Sons, repairing roadway	149 05	
Wm. Robinson, fodder	35 70	
Steele, Briggs Seed Co., seeds	97 25	
W. H. Thomson, teaming	269 79	
Toronto Nurseries, plants	154 10	
Petty items (2)	3 14	
Superintendent's Dept., labor, $5,135.09; material, $222.42	5,357 51	
	$7,747 65	
Less received for sale of material, $75.10; *re* use of tennis court, $34.34; repairs to road, $5.00; cartage, $4.00	118 44	
	$7,629 21	
Foreman gardener, G. Trotter, 12 months to 30th June	$800 00	
Protective Service ($366.89):		
Wm. Greenwood, 1 month and 24 days	90 00	
T. M. Stead, 10 days	16 67	
Crown Tailoring Co., uniform	16 00	
Eco-Magneto Clock Co., dial forms	8 10	
W. A. Wood, time slips	3 50	
Freight and duty charges	4 35	
Superintendent's Dept., labor, $48.67; material, $179.60	228 27	
Special Guards at Central Power Plant ($942.84):		
(At $50.00 per month and 25c. per hour overtime)		
W. E. Grantham, 5 months and 25 nights, $291.67; overtime, $2.00	293 67	
C. Kilminster, 3 months and 7½ nights, $162.49; overtime, $2.50	164 99	
Q. Featherstone, 2 months and 19½ nights, $132.50; overtime, $7.51	140 01	
J. Leitch, 2 months and 22½ nights	137 50	
J. Bridgette, 1 month and 23 nights	88 33	
J. Geoghegan, 21½ nights	35 83	
R. Fulton, 12 nights	20 00	
M. Bresnahan, 10 nights	16 67	
H. A. Godbeer, 7 nights	11 67	
Wm. Greenfield, 3 nights	5 00	
J. Prattis, ½ month	29 17	
		$9,738 94

12. *Examinations.*

NAME.	Remuneration as Examiner.	Expenses.	Presiding Examiner.	Attendant.	Total.
	$ c.	$ c.	$ c.	$ c.	$ c.
Abbott, A. H.	5 25				5 25
Abbott, Mrs. A. H			2 00		2 00
Aldous, J. E. P.	33 00	7 00			40 00
Allan, F. B.	7 00				7 00
Allen, R. J.			13 50		13 50
Anderson, G. R.	5 25				5 25
Angus, R. W.	5 25				5 25
Ardagh, E. G. R.	5 50				5 50
Atkinson, G. D.	56 25	26 05			82 30
Badgley, L. A.			3 00		3 00
Bain, J. W	5 25				5 25
Baker, A. W.	27 50				27 50
Ball, H. D.			10 50		10 50
Ball, R	20 00				20 00
Ballard, W. H.		4 00	4 00		8 00
Beatty, S.	64 00		6 00		70 00
Bell, A. J.	22 25				22 25
Bell, W. J	7 50				7 50
Bensley, B. A.	28 00				28 00
Benson, Miss C. C.	5 25				5 25
Bethune, C. J. S.	11 50				11 50
Bingham. G. A.	50 90				50 00
Bluethner, W. A.	20 90	3 85			24 75
Boddington, D. H.		1 00	30 00		31 00
Bole, C. L				4 00	4 00
Bole, J. G				1 00	1 00
Boswell, M. C.	5 25				5 25
Bowell, J. P.		3 70	40 00		43 70
Boyd, Geoffrey	50 00				50 00
Bready, J. W				12 50	12 50
Brett, G. S.	7 88				7 88
Brodie, J. B.				9 50	9 50
Brodie, T. G.	17 00				17 00
Broome, E.	10 00				10 00
Brown, W. T.	5 75				5 75
Buchanan, M. A.	32 25				32 25
Buchanan, W. B.			21 00		21 00
Bunting, T. G.	5 50				5 50
Burton, E. F.	25 67				25 67
Butler, T. B				14 00	14 00
Caesar, L.	11 00				11 00
Cayley, D. R.	15 00				15 00
Cameron, M. H. V.	45 00				45 00
Campbell J. A.	7 50				7 50
Campbell, T. F.	15 75				15 75
Carlisle, J. O			9 00		9 00
Carment, W. M.				11 50	11 50
Carpenter, T. A	20 00				20 00
Carr, H.	5 50				5 50
Childs, S.				15 00	15 00
Christie, J. D.		2 00	2 00		4 00
Clare, Harvey	45 00				45 00
Clark, A. F. B.	19 00				19 00
Clarkson, F. A.	16 00				16 00
Clawson, W. H.	25 50		53 50		79 00
lement, F. M.	11 00				11 00

12. *Examinations.*—Continued.

NAME.	Remuneration as Examiner.	Expenses.	Presiding Examiner.	Attendant.	Total.
	$ c.	$ c.	$ c.	$ c.	$ c.
Clute, A. R.	44 50				44 50
Cochrane, C. N.	5 75				5 75
Cockburn, J. R.	5 25				5 25
Coglan, F. T	33 00				33 00
Coombs, F. E.			40 00		40 00
Coram, J. W.	11 00				11 00
Cosgrave, F. H.	5 25				5 25
Crawford, J. T.			12 00		12 00
Crerar, S. R.	5 25				5 25
Cringan, A. T.	20 00	4 20			24 20
Crow, J. W.	11 00				11 00
Cudmore, S. A.	34 25				34 25
Curzon, S. R			42 00		42 00
Dale, E. A.	17 50		42 00		59 50
Day, G. E.	11 00				11 00
De Beaumont, V.	26 50				26 50
De Lury, A. T.	18 25				18 25
Detweiler, H. K.			3 00		3 00
De Witt, N. W.	40 00		12 00		52 00
Dibblee, J.			9 00		9 00
Drake, T. G. H.	3 00				3 00
Duff, A. R.			13 50		13 50
Duff, D.	23 00				23 00
Easton, G. S				4 00	4 00
Eberhart, F.	20 00				20 00
Edgar, Pelham	7 00				7 00
Elliott, J. H.	45 00				45 00
Evans, G. A.	29 00				29 00
Fairclough, W. E.	49 58				49 58
Faull, J. H.	38 25				38 25
Ferguson, W. S.	5 25				5 25
Fields, J. C.	12 25				12 25
Fife, B. O.	11 00				11 00
Fletcher, J	16 50				16 50
Forsyth, W. O.	14 05				14 05
Fraser, R. H	3 00				3 00
Fraser, W. H.	15 00				15 00
Frost, G. B.				15 50	15 50
Fulmer, H. L.	23 75				23 75
Gallie, W. E	45 00				45 00
Gardiner, W. A.				17 50	17 50
Gibson, A. L.	22 50				22 50
Gilley, W. H.				53 00	53 00
Graham, C. G				10 50	10 50
Graham, R. R.	23 75				23 75
Grange, E. A. A.	15 00				15 00
Green, L. A.		2 00	2 00		4 00
Griffin, S. P				12 00	12 00
Guest, W. S	5 25		3 00		8 25
Hallam, W. T.			10 50		10 50
Ham, A.	56 87				56 87
Haney, W. C.	20 00				20 00
Harcourt, R.	36 25				36 25
Harris, C. L. M.	28 25	11 90			40 15
Harrison, J. W. F.	26 50	6 80			33 30
Hayes, J. W.	20 00				20 00

12. *Examinations.*—Continued.

NAME.	Remuneration as Examiner.	Expenses.	Presiding Examiner.	Attendant.	Total.
	$ c.	$ c.	$ c.	$ c.	$ c.
Heebner, C. F.	77 00				77 00
Henderson, V. E.	6 25				6 25
Hendrick, A. C.	45 00				45 00
Henry, R.				31 50	31 50
Hermiston, G. M.	8 25				8 25
Herns, F	33 00				33 00
Hewlett, W. H.	97 45	176 40			273 85
Holt, G. E.	6 00				6 00
Howard, J. T.			1 50		1 50
Howitt, J. E.	22 50				22 50
Howland, G. W.	10 00				10 00
Hume, A. D.				12 00	12 00
Hunter, L. I.				26 50	26 50
Huntsman, A. G.	2 75				2 75
Hutton, M.	11 25				11 25
Irwin, J. A.			52 00		52 00
Iveson, W. L	11 50				11 50
Jeanneret, F. C. A.	10 25		88 00		98 25
Johnston, G. W.	20 25		15 00		35 25
Jones, D. H	11 50				11 50
Kennedy, C. A.	16 50				16 50
Kennedy, W. P. M	17 00				17 00
Kenrick, F. B.	31 75				31 75
Kihl, V.	20 30				20 30
King, H. L	22 00				22 00
Kinnear, J. A.	122 00				122 00
Kittredge, R. E. L			33 00		33 00
Laird, Miss A. L	5 25				5 25
Lancaster, H. M.	22 75				22 75
Lane, W. B.	5 25				5 25
Langford, A. L.	11 00				11 00
Laskie, H. J	53 00				53 00
Le Drew, H. H.	18 75				18 75
Liddy, R. B.			53 50		53 50
Little, J. G.		2 50	2 00		4 50
Livingston, G. C	20 00				20 00
Loudon, J. D.	45 00				45 00
Loudon, T. R.	5 25				5 25
Loudon, W. J.	3 09				3 09
Mabee, O. R.	153 00				153 00
Mabee, W. J.	45 00				45 00
Macallum, A. B.	13 50				13 50
Macartney, J				24 00	24 00
MacCallum, J. M	45 00				45 00
Mackenzie, M. A.	12 50				12 50
MacLennan, D. N.	50 00				50 00
Marcellus, F. N	22 00				22 00
Martin, T.	44 80	26 40			71 20
Martin, W. H.			10 50		10 50
Mavor, J.	13 00				13 00
McBrady, R.	2 50				2 50
McCollum, J.	45 00				45 00
McCoy, J.		2 00			2 00
McCubbin, W. A.	6 00				6 00
McCulloch, E. A.	15 00				15 00
McDiarmid, H. H.				46 00	46 00

12. *Examinations.*—Continued.

NAME.	Remuneration as Examiner.	Expenses.	Presiding Examiner.	Attendant.	Total.
	$ c.	$ c.	$ c.	$ c.	$ c.
McGillivray, C. R				6 50	6 50
McGowan, J	5 50				5 50
McIlwraith, K. C	50 00				50 00
McLaren, D				17 00	17 00
McMurrich, J. P	14 25				14 25
McPhedran, A	77 75				77 75
McPhedran, A. G			7 50		7 50
McPhedran, W. F	45 00				45 00
Meader, F. D	5 25				5 25
Mechin, F. C			3 00		3 00
Mickle, G. R	10 00				10 00
Miller, W. Lash	5 50				5 50
Milner, W. S	6 00				6 00
Mitchell, J. S			6 00		6 00
Moore, F. P	16 00				16 00
Moorhead, A. S	55 00				55 00
Murray, J	11 75				11 75
Needler, G. H	5 25				5 25
Netson, H. D	7 50				7 50
Northup, G. T			4 50		4 50
Oille, J. A	55 00				55 00
Owen, E. T	6 25				6 25
Parkin, J. H	5 25				5 25
Parks, W. A	15 83				15 83
Parratt, Sir W	50 00				50 00
Piersol, W. H	7 88				7 88
Porritt, G. H	10 00				10 00
Pounder, I. R	6 50		2 00		8 50
Powell, N. A	29 75				29 75
Powers, W. P	16 00				16 00
Pratt, E. J			31 50		31 50
Pringle, J. N	30 00				30 00
Radcliffe, S. J		4 00	4 00		8 00
Ranson, J			1 50		1 50
Ratcliffe, G. B				7 00	7 00
Reynolds, J. B	5 50				5 50
Ritchie, C. F	49 25				49 25
Robertson, J. C	5 50				5 50
Robertson, W. J		2 00			2 00
Robins, J. D	25 25		13 50		38 75
Robinson, T. R	10 50				10 50
Rollo, Wm	5 25				5 25
Rolph, F. W	76 25		3 00		79 25
Rosebrugh, T. R	5 50				5 50
Ross, G. W	71 50				71 50
Ross, R. A	20 00				20 00
Rutherford, W. W		2 00	2 00		4 00
Rutledge, L. T			18 00		18 00
Sandiford, P			36 00		36 00
Santo, A. E	16 50				16 50
Satterly, J			57 50		57 50
Saunders, D. W	7 50				7 50
Scarrow, A. N			9 00		9 00
Schofield, F. W	7 50				7 50
Schuch, E. W	10 00	4 50			14 50
Scott, P. L	29 00				29 00

12. *Examinations.*—Continued.

NAME.	Remuneration as Examiner.	Expenses.	Presiding Examiner.	Attendant.	Total.
	$ c.	$ c.	$ c.	$ c.	$ c.
Scott, Wm. A.	111 75				111 75
Sexton, J. H.		2 00	2 00		4 00
Shenstone, N. S.	10 00				10 00
Shuttleworth, C. B.	90 50				90 50
Simpson, H. C	9 25				9 25
Sissons, C. B.			15 00		15 00
Smith, E. G.				9 50	9 50
Smith, P. V.				3 50	3 50
Smith, W. G.			31 50		31 50
Smither, W. J.			1 50		1 50
Spicer, S. L	20 00				20 00
Spry, J.	22 75				22 75
Squair, J.	8 00				8 00
Squirrel, W. J.	11 75				11 75
Stanley, C. W.	5 50				5 50
Staples, M. H.				6 00	6 00
Stark, W. B.	3 00				3 00
Starr, C. L.	45 00				45 00
Stewart, L. B.	10 75				10 75
Stone, L				3 50	3 50
Storey, V. H.	20 00				20 00
Strachan, J. T				22 50	22 50
Sutherland, J. L	20 00				20 00
Swanston, A. E.				15 00	15 00
Tattersall, R.	23 15	15 00			38 15
Taylor, R.			7 50		7 50
Taylor, W. R.	38 25				38 25
Thomas, H. F.		2 00	2 00		4 00
Thomson, C. C				1 50	1 50
Tier, Wm		2 00	2 00		4 00
Tracy, F.	5 75				5 75
Traill, J. J.	5 25				5 25
Treadgold, W. M.	10 50				10 50
Tripp, J. D. A.	20 00	5 55			25 55
Trotter, N. G.				23 00	23 00
Tye, W. F.	5 00				5 00
Unwin, G. H.	45 25				45 25
Uren, J. F.	45 00				45 00
Victoria College	10 50				10 50
Vogt, A. S.	30 00				30 00
Wade, R. W.	44 00				44 00
Walker, A. C.	7 50				7 50
Walker, E. M.	5 50				5 50
Walker, T. L.	2 67				2 67
Wallace, J. B.	12 75		103 00		115 75
Walt, C. F	16 50				16 50
Watson, F. E.			16 50		16 50
Wells, P	10 15	1 00			11 15
Welsman, F. S.	10 00				10 00
Wesley, R. W.	45 00				45 00
West, J. B.				3 50	3 50
Wheeldon, H. A.	7 83				7 83
Will, J. S.	6 50				6 50
Willan, H.	51 97				51 97
Willmott, W. E.	11 00				11 00
Wilson, A. C.			15 00		15 00

12. *Examinations.*—Continued.

NAME.	Remuneration as Examiner.	Expenses.	Presiding Examiner.	Attendant.	Total.
	$ c.	$ c.	$ c.	$ c.	$ c.
Wishart, D. J. G.	45 00				45 00
Woodcock, J. N.	8 75				8 75
Wright, A. B.	45 00				45 00
Wright, W. J. T.			3 00		3 00
Wrong, G. M.	32 25				32 25
Wrong, Miss M.	27 75				27 75
Young, C. R.	5 75				5 75
Young, G. S.	65 00				65 00
Zavitz, C. A.	5 50				5 50
Zideman, M.				12 00	12 00
Zimmer, A. R.			6 00		6 00
	4,923 32	319 85	1,043 00	450 50	6,736 67
Less paid by Royal College of Dental Surgeons as share of attendance in Dentistry				21 87	21 87
	4,923 32	319 85	1,043 00	428 63	6,714 80

Apportionment.

	Remuneration as Examiner.	Expenses.	Presiding Examiner.	Attendant.	Total.
	$ c.	$ c.	$ c.	$ c.	$ c.
Arts	826 02	3 70	579 00	284 00	1,692 72
Medicine	2,021 50	1 00	46 50	29 50	2,098 50
Engineering and Applied Science	184 50		153 00		337 50
Education			84 00	66 00	150 00
Law	93 75				93 75
Dentistry	242 00		49 50	21 88	313 38
Pharmacy	145 00		22 50	13 00	180 50
Music	691 05	315 15	41 00		1,047 20
Agriculture	510 50		42 00		552 50
Veterinary Science	209 00		25 50	14 25	248 75
	4,923 32	319 85	1,043 00	428 63	6,714 80

12. *Examinations.*—Continued.

Remuneration to Examiners (as detailed above)		$4,923 32	
Presiding and attendance (as detailed above)		1,471 63	
Examination supplies and sundries, including incidental expenses of Examinations ($1,991.59):			
Examiners' expenses (as detailed above)		319 85	
University Press, examination books, stationery and supplies		1,372 38	
Filling in diplomas:			
Edith E. Shaw, $75.75; R. M. Williams, $68.90		144 65	
Rent of rooms and pianos at various centres:			
W. H. Ballard	$3 75		
Mrs. J. E. Hollingshead	5 00		
S. J. Law	5 00		
J. G. Little	1 00		
Nordheimer Piano and Music Co.	14 00		
Miss B. Peace	2 00		
W. J. Robertson	3 00		
W. W. Rutherford	1 00		
F. Whitney Scherer	3 00		
Mrs. C. Smith	4 00		
		41 75	
Revising lists and determining awards *re* scholarship examinations:			
J. Brebner	$7 35		
A. T. DeLury	3 10		
R. W. Smith	8 60		
		19 05	
City Storage Co., cartage		75	
W. H. Gilley, culling unused paper from examination books		15 00	
C. F. Heebner, supplies for Pharmacy Examinations		62 20	
P. L. Scott, supplies for Pharmacy Examinations		4 00	
Superintendent's Dept., labor		11 96	
Printing examination papers and class lists ($2,062.36):			
University Press		2,062 36	
			$10,448 90

13. *Convocation Expenses.*

Geo. Coles, catering	$60 00	
Harcourt & Son, hoods	142 00	
Mackenzie & Co., moving painting	2 20	
University Press, printing	170 50	
Attendants at $2.00 each ($16.00):		
A. McWilliams, A. Troup, C. Williams, G. Pool, J. W. Rogerson, A. S. Gillan, A. Duncan, R. Ferguson	16 00	
		$390 70

14. *Receptions to Societies and University Visitors.*

Rustom Rustomjee, honorarium for lecture	$25 00	
Townsend's Livery, taxi service	2 00	
University Press, printing	5 10	
York Club, luncheons and accommodation:		
American Peace Delegates	212 94	
Royal Military College Commandant and others	3 65	
Attendants at sundry lectures:		
S. J. Apted	6 00	
D. Forbes	3 00	
		$257 69

15. *Telephones.*

Bell Telephone Co., telephone service to 30th June, 1916		$2,641 78	
Less receipts from sub-services	$595 95		
And from slot machines	23 58		
		619 53	
			$2,022 25

15. *Telephones.*—Continued.

Switchboard operators ($807.46):		
Miss E. Fox, 52 weeks 1 day, at $7.50 per week	391 25	
Miss F. Benner, 52 weeks 1 day, at $7.25 per week	378 21	
Miss I. Beatty, relieving, 1 month	30 00	
Miss M. Rolls, relieving, 1 week	8 00	
		$2,829 71

16. *Insurance.*

Premiums on general schedule (three years):		
Aetna Insurance Co.	$844 75	
Alliance Assurance Co.	844 75	
Atlas Assurance Co.	844 75	
British America Assurance Co.	844 75	
Guardian Assurance Co.	844 75	
Hartford Fire Insurance Co.	844 75	
London Assurance Corporation	844 75	
London and Lancashire Fire Insurance Co.	844 75	
North British and Mercantile Insurance Co.	844 75	
Northern Assurance Co.	844 75	
Norwich Union Fire Insurance Society	844 75	
Phoenix Assurance Co. of London	844 75	
Queen City Fire Insurance Co.	844 75	
Royal Insurance Co.	844 75	
Scottish Union and National Insurance Co.	844 75	
Sun Insurance Office	844 75	
Western Assurance Co.	844 75	
Liverpool, London and Globe Insurance Co. .. $844 75		
Less rebate on cancelled policy..... 18 67		
	826 08	
Commercial Union Assurance Co.	686 36	
Continental Insurance Co.	686 36	
Home Insurance Co.	686 36	
Yorkshire Insurance Co.	686 36	
Phoenix Insurance Co. of Hartford	549 09	
Queen Insurance Co.	549 09	
Caledonian Insurance Co.	422 37	
Mercantile Fire Insurance Co.	422 38	
Perth Mutual Fire Insurance Co.	422 37	
Quebec Fire Assurance Co.	422 38	
Union Assurance Society	422 38	
General Fire Assurance Corporation	274 54	
Insurance Co. of North America	274 54	
London Mutual Fire Insurance Co.	126 71	
Waterloo Mutual Fire Insurance Co.	126 71	
Boiler Inspection and Insurance Co.	600 00	
	$22,544 83	
One-third of above amount charged to revenue, 1915-16 (balance carried forward)	$7,514 94	
Casual premiums:		
North British and Mercantile Insurance Co., workmen's risk, University Stadium	51 60	
Premium on house, 184 College Street	77 50	
		$7,644 04

17. *Advertising Expenses.*

General Advertising ($870.35):		
Acta Ridleiana	$8 00	
Acta Victoriana	20 00	
American Forestry Journal	11 10	
Canadian Almanac	15 00	
Canadian Engineer	50 00	
Canadian Forestry Journal	25 00	

17. *Advertising Expenses.*—Continued.

Canadian Medical Association Journal	49 25	
Canadian Mining Journal	45 00	
Ontario Catholic Year Book	15 00	
The "School"	140 00	
St. Andrew's College Review	15 00	
St. Michael's College Year Book	16 00	
Torontonensis, 1916	60 00	
Trinity University Review	20 00	
Trinity College School Record	9 00	
University Magazine, Montreal	72 00	
University Monthly	200 00	
University Y.M.C.A. Handbook	10 00	
Upper Canada College Times	8 00	
"Varsity"	75 00	
Vox Lycei	7 00	
Advertising re tenders for fuel ($37.80):		
Evening Telegram	$6 30	
Globe Printing Co.	6 30	
Mail and Empire	6 30	
News Publishing Co.	6 30	
Toronto Daily Star	6 30	
Toronto World	6 30	
Sundry announcements inserted by the President ($190.55):		
Evening Telegram	22 20	
Globe Printing Co.	29 20	
Mail and Empire	28 82	
News Publishing Co.	34 85	
Toronto Daily Star	34 98	
Toronto World	40 50	
		$1,098 70

18. *Aid to Publications and Societies.*

Astronomical Journal	$100 00	
Archaelogical School at Jerusalem	100 00	
University Monthly	500 00	
University Engineering Society	150 00	
		$850 00

19. *University Studies.*

H. H. Langton, remuneration as General Editor, 12 months to 30th June	$200 00	
Printing and binding ($875.55):		
Mortimer Co.	266 60	
University Press	599 70	
Miss H. Fairbairn, typewriting copy	9 25	
Reprints ($95.17):		
American Forestry Association (incorrectly charged to Library, 1914-15)	20 00	
E. C. Cockayne $67 70		
Royal Canadian Institute, part cost of shipment 2 97		
	70 67	
A. Bruce Macallum	4 50	
Royalties on sales ($88.50):		
H. H. Langton	44 25	
G. M. Wrong	44 25	
Contributors ($203.00):		
H. P. Biggar	2 00	
S. V. Blake	12 00	
Hume Blake, Jr.	6 00	
E. Cruickshank	3 00	
W. J. A. Donald	6 00	
C. E. Fryer	3 00	
W. F. Ganong	3 00	

19. *University Studies.*—Continued.

W. L. Grant	1 00	
Judge Howay	16 00	
A. F. Hunter	17 00	
Rev. Father Hugolin	2 00	
James F. Kenney	3 00	
H. H. Langton	39 00	
A. MacMechan	8 00	
Chester Martin	13 00	
W. B. Munro	5 00	
E. H. Oliver	3 00	
W. Pakenham	1 00	
D. C. Scott	3 00	
O. D. Skelton	4 00	
J. B. Tyrrell	4 00	
W. S. Wallace	11 00	
Sir John Willison	5 00	
Wm. Wood	1 00	
G. M. Wrong	32 00	
	$1,462 22	
Less charged to Trust Funds Account	291 50	
		$1,170 72

20. *Law Costs.*

John A. Paterson, K.C., taxed costs as solicitor to the University	$419 96	
Less sundry credits	169 00	
		$250 96

21. *General Incidentals.*

Travelling expenses of the Board of Governors and the Senate: ($102.00):		
Board of Governors:		
Judge C. G. Snider	$10 00	
Members of the Senate:		
Wm. Burt	27 20	
James Chisholm	4 00	
J. H. Coyne	37 20	
G. C. Creelman	7 50	
Wm. Dale	10 10	
R. A. Thompson	6 00	
Travelling expenses of the President and Academic Staff ($371.45):		
President Falconer	106 00	
T. G. Brodie	28 20	
H. Maurice Darling, Chicago	4 40	
A. T. DeLury	38 80	
A. B. Macallum	98 10	
A. McPhedran	24 00	
D. J. Gibb Wishart	71 95	
Sundry incidental expenses ($829.65):		
Connell Anthracite Mining Co., fuel supplied to University Y.M.C.A.	122 00	
A. H. Howard, engrossing and illuminating resolution	125 00	
London Guarantee and Accident Co., premium on guarantee bonds	360 00	
Sir Edmund Walker, chairman's disbursements for postage	4 45	
R. M. Williams, engrossing addresses	26 00	
Workmen's injuries:		
Geo. C. Cooper	99 00	
C. T. Gray	79 20	
Dr. Chas. H. Hair, medical attendance	14 00	
		$1,303 10
		$127,189 65

II. Faculty of Arts.

23. *Salaries.*

(1) Departments in University of Toronto ($176,392.05).

Mathematics.

Professors, each 12 mos. to 30th June:		
A. Baker (also Dean of Faculty)	$4,000 00	
A. T. DeLury	3,800 00	
M. A. Mackenzie	3,300 00	
J. C. Fields	3,300 00	
Lecturers (Sessional):		
S. Beatty	1,900 00	
I. R. Pounder	1,400 00	
Fellows (Sessional) at $500:		
A. W. Johnston	500 00	
F. Phillips	500 00	
		$18,700 00

Mechanics.

W. J. Loudon, Professor, 12 mos. to 30th June	$3,800 00	
		$3,800 00

Physics.

J. C. McLennan, Professor, 12 mos. to 30th June	$4,000 00	
E. F. Burton, Associate Professor, 12 mos. to 30th June	2,600 00	
L. Gilchrist, Demonstrator, 12 mos. to 30th June	2,000 00	
Lecturers (Sessional):		
J. Satterly, $2,000, and extra work $40	2,040 00	
H. A. McTaggart, at $1,600 (war service, half pay)	800 00	
Miss R. M. Evans, Assistant Demonstrator (Sessional) at $750, resigned 5th Feb.	395 00	
Assistant Demonstrators (Sessional) at $500:		
D. S. Ainslie (and extra work, $20)	520 00	
H. Buckley (and extra work, $20)	520 00	
R. C. Dearle (and extra work, $20)	520 00	
C. G. Found (resigned 31st Dec.)	187 50	
Andrew Thomson (from 1st Jan.)	312 50	
D. A. Keys (and extra work, $40)	540 00	
K. H. Kingdon	500 00	
Miss A. T. Reed, Class Assistant (Sessional) and Stenographer, combined salary for 12 mos.	800 00	
Lecture and Laboratory Assistant (Sessional):		
P. Blackman, at $1,000, 1 July to 15 Dec., $458.33; war service, payment at rate of $100 per annum from 1 Jan., $50	508 33	
J. W. Lawson, substitute to 30th June, $17.30 per week	500 12	
Mechanicians:		
T. S. Plaskett, 12 mos. to 30th June	1,200 00	
G. Tarry, Assistant at $800 (resigned 30th April)	666 66	
J. F. T. Young, 1st May to 30th June, at $66.66 per month	133 33	
E. Slade, Assistant, at $450 per annum to 15th Oct., $131.25; honorarium upon enlistment, $75	206 25	
G. W. Kiernan, 36 weeks, 4½ days at $6 per week	220 91	
Glass-blowers, share of salaries detailed under Physiology	736 00	
J. Wicksey, Laboratory Carpenter, 12 mos. to 30th June at $900, of which $550 charged as Caretaker of Physics building	350 00	
S. Richardson, Attendant (Sessional) on reduced service	300 00	
		$20,556 60

23. *Salaries.*—Continued.

Astro-Physics.

C. A. Chant, Associate Professor, 12 mos. to 30th June.....	$3,000 00	
Assistants (Sessional):		
J. P. Henderson	500 00	
F. L. Blake	100 00	
H. J. C. Ireton	50 00	
H. H. Plaskett	50 00	
		$3,700 00

Geology.

A. P. Coleman, Professor, 12 mos. to 30th June	$4,000 00	
W. A. Parks, Associate Professor, 12 mos. to 30th June.....	3,200 00	
A. MacLean, Lecturer (Sessional)	1,800 00	
Laboratory Attendant (Sessional) at $50 a month:		
J. Cameron, 1st Oct. to 31st Jan.	200 00	
R. Wilson, 1st Feb. to 30th April	150 00	
		$9,350 00

Mineralogy.

T. L. Walker, Professor, 12 mos. to 30th June	$3,800 00	
A. L. Parsons, Assistant Professor, 12 mos. to 30th June	2,300 00	
Ellis Thomson, Lecturer (Sessional)	1,300 00	
H. V. Ellsworth, Fellow (Sessional—half time).....	250 00	
Laboratory Attendant (Sessional):		
W. Allingham (war service) payment to mother at $10 a month for 7 mos.	70 00	
R. J. McCullagh, substitute, 6 mos. salary to 31st March...	300 00	
		$8,020 00

Chemistry.

Professors, each 12 mos. to 30th June:		
W. R. Lang	$3,800 00	
W. Lash Miller, Physical Chemistry	3,800 00	
Associate Professor, each 12 mos. to 30th June:		
F. B. Kenrick	3,000 00	
F. B. Allan, Organic Chemistry	3,000 00	
Assistants (Sessional) at $600:		
G. H. Brother	600 00	
H. R. Cozier (less $19)	581 00	
W. S. Funnell	600 00	
Assistants (Sessional) at $500:		
G. B. Frost	500 00	
D. McLaren (less $17)	483 00	
G. O. Morrison (resigned 31st March)	375 00	
E. J. Repath, Laboratory Assistant (with rooms, heat and light as Caretaker of Chemical building), 12 mos. to 30th June.	800 00	
J. Smith, Laboratory Attendant, 12 mos. to 30th June	600 00	
		$18,139 00

Biology.

B. A. Bensley, Professor of Zoology, 12 mos. to 30th June.....	$3,300 00	
W. H. Piersol, Associate Professor of Histology, 12 mos. to 30th June	2,700 00	
E. M. Walker, Assistant Professor of Zoology, 12 mos. to 30th June	2,200 00	
Lecturers (Sessional):		
A. G. Huntsman	2,000 00	
A. F. Coventry, Vertebrate Embryology, at $1,500, (war service, half pay)	750 00	
Demonstrators (Sessional):		
W. H. T. Baillie	800 00	
P. M. Bayne	800 00	

23. *Salaries.*—Continued.

Class Assistants (Sessional):		
L. O. C. Skeeles	200 00	
Miss B. K. Mossop	135 00	
E. H. Craigie (paid also as Preparator)	120 00	
F. J. Bell	100 00	
N. O. Thomas	100 00	
H. D. Ball	80 00	
H. V. Dobson	80 00	
D. B. Wilson	80 00	
H. G. Willson	65 00	
G. H. Duff (paid also in Botany)	25 00	
O. C. J. Withrow	15 00	
Preparator (Sessional):		
H. T. White	450 00	
E. H. Craigie, 1 month (paid also as Class Assistant)	40 00	
A. Pride, Sub-Curator, Biological Museum, 12 mos. to 30th June.	850 00	
Museum Assistant and Cataloguer (10 mos., half time):		
J. B. Williams, 3 months	97 50	
E. B. S. Logier, 7 months	227 50	
Miss E. Mason, Office Assistant, 12 mos. to 30th June	500 00	
F. W. Small, Laboratory Attendant, 12 mos. to 30th June	480 00	
		$16,195 00

Botany.

Associate Professors, each 12 mos. to 30th June:		
J. H. Faull	$3,000 00	
R. B. Thomson	2,600 00	
C. D. Howe, Assistant Professor, 12 mos. to 30th June, at $2,300, of which $1,150 charged to Forestry	1,150 00	
J. H. White, Lecturer (Sessional) at $2,000, of which $1,500 charged to Forestry	500 00	
Miss J. McFarlane, Demonstrator (Sessional)	800 00	
Fellows (Sessional) at $500:		
N. C. Hart	500 00	
Miss G. Wright	500 00	
Assistants (Sessional):		
G. H. Duff (paid also in Biology)	100 00	
E. H. Moss	100 00	
Miss I. Underhill	100 00	
A. Simpson, Gardener, 12 mos. to 30th June, salary $900; (extra labor at night during winter, $50, charged to maintenance)	900 00	
Laboratory Attendant:		
A. Burnett, 1st July to 4th March at $350 per annum	237 22	
J. Armstrong, 7th March to 30th June at $20 per month	75 33	
		$10,562 55

Bio-Chemistry.

A. B. Macallum, Professor, 12 mos. to 30th June	$4,000 00	
Lecturers (Sessional):		
R. J. Manning	1,500 00	
A. W. Peters (Easter Term)	750 00	
Miss M. M. Fraser, Assistant (Sessional)	500 00	
G. S. Eadie, Fellow (Sessional)	500 00	
Laboratory Assistants:		
J. Lowndes, at $650, war service, balance after payment of substitute	150 00	
Miss M. Davis, substitute, 8 months' salary	500 00	
A. E. Giddens, 12 mos. to 30th June	600 00	
Stenographer at $625 per annum:		
Miss B. Rhodes, resigned 30th September	156 25	
Miss C. Casserly, from 6th October	460 07	
		$9,116 32

23. *Salaries.*—Continued.

Physiology.

T. G. Brodie, Professor, 12 mos. to 30th June		$4,000 00	
F. A. Hartman, Lecturer (Sessional)		2,000 00	
Fellows (Sessional) at $500:			
A. Brodey		500 00	
Miss L. McPhedran		500 00	
Miss M. G. Marsh, Assistant for part of Session		520 00	
C. Stewart, Mechanician, 12 months' salary		900 00	
Laboratory Assistant:			
F. L. Robinson, at $750, war service, balance after payment of substitute		453 90	
C. Bird, substitute, 22nd Nov. to 31st May, at $47 a month.		296 10	
Laboratory Attendant, half time, balance in Surgery:			
L. Jackson, 1st Nov. to 15th May, at $536 per annum		156 33	
F. Scruby, occasional assistance		25 00	
Mrs. Ashdown, occasional assistance		20 25	
Glass Blowers:			
F. D. Mezen, 12 months' salary	$1,250 00		
Miss R. Ingram, 12 months' salary	386 00		
H. R. Lindsley, 6 weeks at $26 per week	156 00		
	$1,792 00		
Less charged to Physics	736 00		
		1,056 00	
			$10,427 58

History and Ethnology.

G. M. Wrong, Professor, 12 mos. to 30th June		$4,000 00	
E. J. Kylie, Associate Professor, at $2,800, 1st July to 31st Dec., $1,400; war service, half pay from 1st Jan.; (obit 14th May), salary in full to 30th June paid to parents, $1,400		2,800 00	
Lecturers (Sessional), each war service, half pay:			
R. H. Williams, at $1,800		900 00	
G. M. Smith, at $1,500		750 00	
V. Massey, at $500		250 00	
W. S. Wallace, Lecturer (Sessional—part time) at $500, Michaelmas Term, $250, and extra work, $125; war service from 1st Jan., half pay, $125		500 00	
Instructors (Sessional):			
Miss H. McMurchie, $850; and extra work $250		1,100 00	
W. P. M. Kennedy (part time)		750 00	
			$11,050 00

Comparative Philology.

A. J. Bell, Professor, 12 mos. to 30th June		$600 00	
			$600 00

Italian and Spanish.

W. H. Fraser, Professor, 12 mos. to 30th June		$3,800 00	
M. A. Buchanan, Associate Professor, 12 mos. to 30th June		2,700 00	
G. T. Northup, Assistant Professor, 12 mos. to 30th June		2,300 00	
M. Catalano, Instructor (Sessional), at $900; 1st Oct. to 31st Jan., $450; war service, half pay from 1st Feb., $225		675 00	
			9,475 00

Philosophy and Psychology.

J. G. Hume, Professor of History of Philosophy (paid as Professor of Ethics)		.. ..	
Associate Professors, each 12 mos. to 30th June:			
F. Tracy		3,200 00	
A. H. Abbott		3,000 00	
Assistant Professors, each 12 mos. to 30th June:			
W. G. Smith, Psychology		2,300 00	
T. R. Robinson, Philosophy		2,300 00	

23. *Salaries.*—Continued.

G. S. Brett, Lecturer in Greek Philosophy (Sessional)	2,000 00	
E. J. Pratt, Demonstrator (Sessional)	1,000 00	
Miss M. Laird, Class Assistant (Sessional)	400 00	
		14,200 00

Political Science.

J. Mavor, Professor, 12 mos. to 30th June	$3,800 00	
R. M. MacIvor, Associate Professor, 12 mos. to 30th June	2,500 00	
Lecturers (Sessional):		
S. A. Cudmore	1,800 00	
W. T. Jackman	1,800 00	
A. H. F. Lefroy, Professor of Roman Law, Jurisprudence and History of English Law, 12 mos. to 30th June, $1,300; additional lectures (Sessional) in Federal Constitutional Law, $700	2,000 00	
J. D. Falconbridge, Lecturer in Commercial and International Law (Sessional)	600 00	
		12,500 00

(2) *Departments in University College* ($75,416.67).

Greek.

M. Hutton, Professor, 12 mos. to 30th June (paid also as Principal, University College)	$4,000 00	
A. Carruthers, Associate Professor, 12 mos. to 30th June	3,200 00	
		7,200 00

Latin.

J. Fletcher, Professor, 12 mos. to 30th June	$4,000 00	
G. W. Johnston, Associate Professor, 12 mos. to 30th June	3,000 00	
G. Oswald Smith, Assistant Professor, 12 mos. to 30th June	2,300 00	
D. Duff, Lecturer (Sessional)	1,600 00	
		10,900 00

Ancient History.

W. S. Milner, Professor, 12 mos. to 30th June	$3,800 00	
Lecturers (Sessional):		
A. Grant Brown, at $1,800, half time	900 00	
E. A. Dale	1,500 00	
C. N. Cochrane, at $1,400; 1st July to 31st Dec., $700; war service, half pay from 1st Jan., $350	1,050 00	
		7,250 00

English.

W. J. Alexander, Professor, 12 mos. to 30th June	$4,000 00	
Associate Professors, each 12 mos. to 30th June:		
D. R. Keys, Anglo-Saxon	3,200 00	
M. W. Wallace	3,000 00	
Lecturers (Sessional):		
W. H. Clawson	1,900 00	
A. F. B. Clark	1,500 00	
		13,600 00

French.

J. Squair, Professor, 12 mos. to 30th June (resigned)	$3,800 00	
Associate Professors, each 12 mos. to 30th June:		
J. H. Cameron	3,200 00	
St. E. DeChamp	2,700 00	
J. S. Will (paid also as Registrar of University College)	2,800 00	

23. *Salaries.*—Continued.

Lecturers (Sessional):		
F. C. A. Jeanneret	1,400 00	
J. B. Wallace	1,300 00	
Instructors (Sessional), each war service, full pay:		
P. Balbaud	800 00	
L. A. Bibet	500 00	
		16,500 00
German.		
G. H. Needler, Professor, 12 mos. to 30th June	$3,300 00	
B. Fairley, Associate Professor from 1st Aug., at $2,500 per annum	2,291 67	
P. Toews, Assistant Professor, 12 mos. to 30th June (absent on sick leave), at $2,300, less paid to substitute, $1,000	1,300 00	
G. E. Holt, Instructor (Sessional), substitute for Prof. Toews	1,000 00	
		7,891 67
Oriental Languages.		
W. R. Taylor, Professor, 12 mos. to 30th June	$3,200 00	
J. A. Craig, Associate Professor, 12 mos. to 30th June	2,500 00	
		5,700 00
Ethics.		
J. G. Hume, Professor, 12 mos. to 30th June (also Professor of History of Philosophy, University of Toronto)	$3,600 00	
		3,600 00
University College, General.		
M. Hutton, Principal, 12 mos. to 30th June (paid also as Professor of Greek)	$1,000 00	
J. S. Will, Registrar, 12 mos. to 30th June (paid also as Associate Professor of French)	300 00	
Miss C. Tocque, Assistant to Registrar, 15th Sept. to 30th June, at $50 a month	475 00	
Miss L. Salter, Lady Superintendent, 12 mos. to 30th June	1,000 00	
		2,775 00
		$251,808 72

24. *Retiring Allowances.*

Professor R. Ramsay Wright, retiring allowance, 12 mos. to 30th June	$2,750 00	
		$2,750 00

25. *Main Building.*

Heat and light (supplied from Central Power Plant):		
Gas, city current and occasional fuel ($23.52):		
Consumers' Gas Co.	$23 52	
Water ($110.87):		
City Treasurer	110 87	
Caretaker's supplies ($307.93):		
Superintendent's Dept., material	307 93	
Cleaning ($1,799.97):		
Allen Mfg. Co., laundry	4 56	
Canadian Cleaning Co., cleaning windows	50 00	
Ontario Laundry Co., laundry	3 67	
Superintendent's Dept., labor	1,741 74	
Repairs and renewals ($2,954.35):		
Wm. Bartlett & Son, shades	18 90	
Canada Furniture Manufacturers, chair	7 35	
Canadian Powers Regulator Co., installing thermostats	98 45	

25. *Main Building.*—Continued.

Wm. Card, exterminating rats	7 50	
T. Eaton Co., oak flooring, $214.00; cork carpet, $21.60	235 60	
Elevator Specialty Co., repairs	8 00	
Lautz-Dunham Co., repairs to tile floors	18 80	
A. Matthews, repairs to roof	159 01	
Patterson & Heward, sign plates	18 50	
R. Robertson & Sons, pointing brickwork	62 27	
Routery Bros., plastering	30 00	
University Press, door labels	5 30	
Freight charges	2 53	
Petty items (2)	4 10	
Superintendent's Dept., labor, $1,447.10; material, $830.94	2,278 04	
	$5,196 64	
Less sundry credits: cleaning, $117.85; repairs, $81.72	199 57	
	$4,997 07	
Janitor, C. E. Bradshaw, 12 mos. to 30th June	900 00	
Messenger Service:		
George Donkin (obit. February, salary to 30th June continued to widow)	450 00	
Boys at $4.00 to $6.00 per week:		
James Inglis, 40 weeks 3 days	224 38	
E. Jarvis, 35 weeks 4 days	150 67	
P. Osborne, 12 weeks	53 00	
E. Wicksey, 10 weeks 1 day	50 83	
F. Nicholson, 4 weeks	18 00	
Car fares of messengers	30 00	
		$6,873 95

26. *Biological Building and Department.*

(*a*) Maintenance of Building:		
Heat and light (supplied from Central Power Plant):		
Gas, city current and occasional fuel ($57.61):		
Consumers' Gas Co.	$39 62	
Connell Anthracite Mining Co.	17 99	
Water ($38.30):		
City Treasurer	38 30	
Caretaker's supplies ($97.32):		
Superintendent's Dept., material	97 32	
Cleaning ($537.38):		
Allen Mfg. Co., laundry	8 09	
Canadian Cleaning Co., cleaning windows	30 00	
Ontario Laundry Co., laundry	8 12	
Superintendent's Dept., labor	491 17	
Repairs and renewals ($957.62):		
Wm. Bartlett & Son, shades	7 46	
Wm. Card, exterminating rats	7 50	
City Treasurer, elevator license	5 00	
Forbes Roofing Co., repairs to roof	33 45	
A. Matthews, repairs to roof	308 00	
T. H. Robinson, repairs to clock	2 00	
Routery Bros., plastering	53 55	
Superintendent's Dept., labor, $323.66; material, $217.00	540 66	
Caretaker, D. J. Clark (with rooms, heat and light), 12 months to 30th June	750 00	
Attendant, Anatomical Section, T. J. Richardson, 12 mos. to 30th June	550 00	
		$2,988 23
(*b*) Maintenance of Department:		
Laboratory and Lecture Room supplies ($350.79):		
Art Metropole, paper	$10 88	
Bausch & Lomb Optical Co., chemicals	4 96	
W. R. Brock Co., cloth	5 63	

26. *Biological Building and Department.*—Continued.

Collett-Sproule, boxes	5 50
Dominion Glass Co., rings	2 20
Freyseng Cork Co., corks	11 18
Ingram & Bell, chemicals	6 75
Inland Revenue Dept., methylated spirits	24 62
Chas. W. Mack, marker	4 70
Marine Biological Laboratory, embryos	6 90
Miller Mfg. Co., coats	34 00
Miss B. K. Mossop, wall charts	42 00
J. L. C. Nornabell, tank	3 50
Photoart Co., supplies	11 90
J. G. Ramsey & Co., chemicals	4 47
Richards Glass Co., vials	12 00
Spencer Lens Co., chemicals	20 15
Students' Book Dept., book	3 40
Topley Co., glassware and supplies	71 57
W. Lloyd Wood, chemicals	32 31
University Press, printing and stationery	15 85
Petty items (2)	2 04
Freight charges	2 97
Superintendent's Dept., labor, $10.91; material, 40c.	11 31
Museum specimens and supplies ($171.95):	
T. B. Kurata, travelling expenses, collecting specimens	6 85
Dr. H. J. Veth, for account of P. Wytsman (Brussels), specimens	74 19
University Press, printing	2 50
Freight charges	19 13
Superintendent's Dept., labor, $48.70; material, $20.58	69 28
Marine and Lake Laboratories ($50.00):	
Expenses to and from station and collecting:	
H. T. White, travelling expenses	50 00
Students' Laboratory supplies ($605.26):	
W. R. Brock Co., cloth	16 22
J. J. Dickson, frogs	52 20
J. F. Hartz Co., cover glasses, $72.00; slides, $48.00; section boxes, $32.50	152 50
Inland Revenue Dept., methylated spirits	21 88
Marine Biological Laboratory, specimens	71 34
Toronto Dog and Cat Hospital, animals	57 50
W. Lloyd Wood, chemicals	40 08
University Press, drawing books and pads	160 15
Freight charges	28 59
Superintendent's Dept., material	4 80
Apparatus ($72.95):	
Spencer Lens Co., dissecting-stands, lamps, etc.	72 05
Freight charges	90
Furnishings and departmental fittings ($183.55):	
T. Eaton Co., couch	12 75
Superintendent's Dept., labor, $120.47; material, $50.33	170 80
Incidentals ($100.90):	
Aikenhead Hardware, hardware	6 04
Art Metropole, ink	2 00
Prof. B. A. Bensley, disbursements:	
Laboratory and office supplies, $18.16; postage and car fares, $10.69; cartage and express, $4.40; animal and fodder, $3.23; sundries, $3.52	40 00
Office Specialty Mfg. Co., fyling cases	6 62
Ontario Laundry Co., laundry	3 30
Remington Typewriter Co., inspection	9 00
University Press, stationery and supplies	23 55
Petty items (2)	1 50
Freight charges	8 89
Messenger Service ($148.50):	
Arthur Stockdale, 33 weeks at $4.50 per week	148 50
	$1,683 90

26. *Biological Building and Department.*—Continued.

Less sundry credits:			
Embalming animals:			
Royal College of Dental Surgeons	$29 00		
Western University, London	25 00		
Inland Revenue Dept., barrels returned	7 90		
		61 90	
			$1,622 00
			$4,610 23

27. *Sub-Department of Botany.*

Apparatus and equipment ($377.83):	
Keuffel & Esser, borer	$5 77
James Morrison Brass Mfg. Co., repairs	4 00
Spencer Lens Co., objective	24 15
Prof. R. B. Thomson, petty disbursements	8 12
Topley Co., apparatus	123 53
United Typewriter Co., typewriter, $98.00; desk and chair, $32.75	130 75
J. H. White, test tubes purchased	1 75
Freight charges	20
Superintendent's Dept., labor, $39.77; material, $39.79	79 56
Laboratory and office supplies ($448.71):	
Bausch & Lomb Optical Co., chemicals	3 00
The Bursar, postage supplied	5 00
Lake Simcoe Ice Supply Co., ice	10 85
Students' Book Dept., rulers	6 00
Telfer Mfg. Co., cases	7 80
Prof. R. B. Thomson, disbursements:	
Car fares and postage, $11.94; flowers, etc., $4.25; office supplies and sundries, $7.32	23 51
Topley Co., cover glasses	20 60
United Photographic Stores, supplies	4 05
United Typewriter Co., inspection and supplies	17 25
W. Watson & Sons, slides and cover glasses	77 60
University Press, book covers and stationery	251 51
Petty items (3)	3 62
Freight charges	9 25
Superintendent's Dept., labor, $5.72; material, $2.95	8 67
Museum and Herbarium supplies ($361.57):	
E. Bartholomew, plants	12 32
Geo. M. Hendry Co., charts	10 39
Photography, Dept. of, slides, etc	24 90
Mrs. J. E. Ridgway, color standards	8 20
J. E. Tilden, plants	46 50
Topley Co., specimen jars	69 09
University Press, labels and mounting paper	50 60
Petty items (2)	1 05
Freight and duty charges	37 95
Superintendent's Dept., labor, $72.10; material, $28.47	100 57
Assistance in Museum and Herbarium ($403.30):	
Miss L. V. Baker, plant breeding, etc	45 00
W. F. Bumsted, preparing negatives	10 00
Miles Burford, 210 hours at 30c. per hour	63 00
Miss M. Colclough, preparing outlines	24 00
N. C. Hart, 108½ hours at 40c. per hour	43 40
Miss J. McFarlane, 79 hours at 50c. per hour	39 50
Miss I. Underhill, 304 hours at 35c. per hour	106 40
J. White, mounting plants	70 60
Miss J. G. Wright, 3½ hours at 40c. per hour	1 40
Botanic Garden and Greenhouse supplies, material and labor ($932.25):	
W. Calder & Son, tools	3 95
California Nursery Co., Inc., plants	24 45
Carters Tested Seeds, Inc., seeds	9 71
Robt. F. Hogg, labels	2 50

27. *Sub-Department of Botany.*—Continued.

Kirk Chemical Co. of Canada, feeder	5 88	
J. Manning, manure	10 00	
A. Matthews, gutter pipe	7 00	
Ontario Agricultural College, tree surgery	2 40	
W. F. Petry, lumber	79 19	
Ryder & Son, seeds	3 87	
J. A. Simmers, pots and tools	16 45	
Alex. Simpson, tending fire in greenhouse, Sundays and holidays, 5 months	50 00	
Prof. R. B. Thomson, disbursements:		
Hardware, oils, etc., $17.42; collecting specimens, $3.31; car fares, etc., $2.20; sundries, $5.06	27 99	
Freight charges	2 90	
Superintendent's Dept., labor, $67.36; material, $56.32	123 68	
Frank Ball, 2 months at $55.00, $110.00; 1 month at $50.00, $50.00; 88 hours at 28c. per hour, $24.64	184 64	
Miles Burford, 444 hours at 30c.	133 20	
N. C. Hart, 138 hours at 40c	55 20	
J. H. Kingston, 220 hours at 30c	66 00	
Joseph Simpson, 1 month at $65.00, $65.00; 13 days at $55.00 per month, $24.00	89 00	
G. Thomson, 38 hours at 25c. per hour	9 50	
G. Townes, 22 hours at 25c. per hour	5 50	
Charles Waddie, 68 hours at 28c. per hour	19 24	
Clerical Assistance ($155.00):		
Miss M. Colclough, 12 weeks, 5½ days at $12.00 per week	155 00	
	$2,678 66	
Less received from students for breakages, etc.	33 00	
		$2,645 66

28. *Department of Bio-Chemistry.*

Maintenance, laboratory and office supplies ($1,048.60):		
Arlington Chemical Co., chemicals	$8 10	
Baird & Tatlock (London), Ltd., glassware, supplies and apparatus	466 79	
Beaver Flint Glass Co., test tubes	30 00	
Canadian Carbonate Co., gas	3 00	
J. S. Chapman & Co., burners	28 50	
Eimer & Amend, chemicals	7 00	
Freyseng Cork Co., corks	3 46	
General Chemical Co., chemicals	83 71	
Grasselli Chemical Co., chemicals	31 00	
Lake Simcoe Ice Supply Co., ice	56 45	
Lenz & Naumann, Inc., chemicals	10 35	
Lyman Bros. & Co., chemicals	93 57	
Prof. A. B. Macallum, disbursements:		
Laboratory supplies, $20.08; car fares and sundries, $4.70	24 78	
MacBeth-Evans Glass Co., glassware	40 87	
Ontario Laundry Co., laundry	1 15	
Ontario Rubber Co., tubing	10 16	
Photography, Dept. of, slides	1 25	
Henry Sothern & Co., books	17 87	
Synthetic Drug Co., chemicals	11 00	
Arthur H. Thomas Co., crucibles	12 86	
University Press, stationery and supplies	71 09	
Freight charges	9 92	
Superintendent's Dept., labor, $59.07; material, $73.17	132 24	
Clerical assistance:		
Miss H. J. Miller	2 00	
Miss O. Russell	2 00	
	$1,159 12	

28. *Department of Bio-Chemistry.*—Continued.

Less sundry credits:			
Received from students for breakages, etc....	$106 57		
Inland Revenue Dept., barrels returned.....	3 95		
		110 52	
			$1,048 60

29. *Physiological Department.*

Maintenance, laboratory and office supplies ($1,131.57):		
Anglers' Bait & Mfg. Co., frogs	$33 60	
Baines & Peckover, steel	9 33	
Wm. Blaikie, castings	9 45	
Prof. T. G. Brodie, disbursements:		
Hardware, glass, oils, etc., $100.29; chemicals and laboratory supplies, $77.98; laundry, $11.78; food for animals, $8.85; books, $8.37; car fares, postage and sundries, $36.73	244 00	
Brown & Sharpe Mfg. Co., reamers	4 13	
Canadian General Electric Co., supplies	35 48	
Christie, Brown & Co., biscuit	90 91	
Driver-Harris Wire Co., wire	7 46	
Edison Storage Battery Co., batteries	68 15	
J. A. Fontaine, frogs	31 00	
Hawksley & Sons, tubing	5 33	
Ingram & Bell, chemicals and supplies	53 44	
Kimble-Durand Glass Co., tubing	20 25	
Lowe-Martin Co., folders and cards	20 80	
Lyman Bros. & Co., chemicals	9 99	
Norman Macdonald, carborundum	3 20	
Chas. Potter, gas	5 00	
Spencer Lens Co., carbons	8 70	
Standard Foundry Co., castings	10 80	
Wm. Staughton, fodder	4 72	
Students' Book Dept., supplies	5 10	
Toronto Dog and Cat Hospital, animals	126 90	
H. C. Tugwell & Co., supplies	13 88	
United Typewriter Co., inspection	2 25	
University Press, printing and stationery	74 65	
Petty items (3)	3 10	
Freight charges	11 12	
Superintendent's Dept., labour, $95.16; material, $123.67...	218 83	
Apparatus ($214.42):		
F. E. Becker & Co.	81 76	
Canadian Westinghouse Co.	23 75	
W. and L. E. Gurley	28 65	
Spencer Lens Co.	53 55	
John Weiss & Son	21 88	
Freight charges	4 83	
		$1,345 99

30. *Chemical Building and Department.*

(*a*) Maintenance of Building:		
Heat and light (supplied from Central Power Plant):		
Gas, city current and occasional fuel ($87.15):		
Consumers' Gas Co.	$87 15	
Water ($28.60):		
City Treasurer	28 60	
Caretaker's supplies ($65.66):		
Superintendent's Dept., material	65 66	
Cleaning ($595.67):		
Allan Mfg. Co., laundry	1 47	
Canadian Cleaning Co., cleaning windows	11 00	
Ontario Laundry Co., laundry	1 52	
Superintendent's Dept., labour	581 68	

30. *Chemical Building and Department.*—Continued.

Repairs and renewals ($705.05):			
Wm. Card, exterminating rats		7 50	
Dunlop Tire and Rubber Goods Co., hose		7 12	
Elliott & Brown, repairs		5 00	
A. Matthews, repairs to roof		170 40	
Superintendent's Dept., labour, $350.80; material, $164.23		515 03	
			$1,482 13
Caretaker, E. Repath (paid as laboratory attendant, with rooms, fuel and light chargeable against building and included in above)		.....	
(*b*) Maintenance of Department:			
Chemicals, glassware and apparatus ($1,165.31):			
Aikenhead Hardware, hardware		$3 42	
J. T. Baker Chemical Co., chemicals		451 67	
Bausch & Lomb Optical Co., repairs		4 18	
The Bursar, postage supplied		2 00	
Hardware Co. of Toronto, rod		1 59	
Prof. W. R. Lang, disbursements:			
Postage and car fares, $29.21; laboratory supplies and sundries, $19.75		48 96	
Lyman Bros. & Co., chemicals		43 09	
T. G. Rice Wire Mfg. Co., wire mesh		17 10	
R. Robertson & Sons, concrete floor in basement		40 00	
Arthur H. Thomas Co., crucibles, etc.		70 66	
Toronto School Supply Co., glassware and supplies		156 68	
United Typewriter Co., inspection and repairs		7 50	
University Press, note books and stationery		152 75	
Freight charges		22 48	
Superintendent's Dept., labor, $277.86; material, $212.57		490 43	
		$1,512 51	
Less sundry credits:			
Received from Students' Account	$300 00		
Grasselli Chemical Co., empties returned	37 20		
Sale of old brick	10 00		
		347 20	
		$1,165 31	
Incidental laboratory, cleaning ($118.12):			
W. Magee, 26 weeks 1½ days at $4.50 per week		118 12	
			$1,283 43
			$2,765 56

31. *Sub-Department of Physical Chemistry.*

Chemical apparatus and maintenance ($304.22):		
Baker & Co., Inc., cylinder	$69 08	
Canadian General Electric Co., lamps, etc.	9 50	
O. A. Castrucci, moulds	15 00	
Driver-Harris Wire Co., wire	3 34	
Leeds & Northup Co., apparatus	130 30	
F. D. Mezen, apparatus	35 00	
Northern Electric Co., wire	1 20	
C. Stewart, thermostat and apparatus	35 00	
University Press, stationery	1 65	
Freight charges	55	
Superintendent's Dept., material	3 60	
		$304 22

32. *Physics Building and Department.*

(*a*) Maintenance of Building:		
Heat and light (supplied from Central Power Plant):		
Gas, city current and occasional fuel ($2.87):		
Consumers' Gas Co.	$2 87	

32. *Physics Building and Department.*—Continued.

Water ($65.05):		
City Treasurer	65 05	
Caretaker's supplies ($84.97):		
Superintendent's Dept., material	84 97	
Cleaning ($935.93):		
Allen Mfg. Co., laundry	4 74	
Canadian Cleaning Co., cleaning windows	33 00	
Ontario Laundry Co., laundry	1 69	
Superintendent's Dept., labor	896 50	
Repairs and renewals ($1,007.64):		
Wm. Card, exterminating rats	7 50	
City Treasurer, elevator license	5 00	
R. Robertson & Sons, masonry	80 64	
Superintendent's Dept., labor, $598.14; material, $316.36	914 50	
	$2,096 46	
Less sundry credits: cleaning	32 00	
	$2,064 46	
Caretaker, J. Wicksey (paid also $350.00 as laboratory carpenter)	550 00	
		$2,614 46
(*b*) Maintenance of Department:		
Laboratory and workshop supplies ($2,027.36):		
Aikenhead Hardware, hardware	$132 12	
Ansco Co., supplies	2 61	
Baines & Peckover, steel	3 85	
Baird & Tatlock (London), Ltd., glassware and supplies.	152 00	
Beardmore Belting Co., belting	6 31	
British American Oil Co., oil	4 15	
British Oxygen Co., cups, etc.	23 76	
The Bursar, postage supplied	20 00	
Cambridge Scientific Instrument Co., levels	7 41	
Canada Metal Co., lead	16 25	
Canadian Carbonate Co., gas	6 00	
J. Carpentier, supplies	7 39	
John Catto & Son, towels	9 00	
Central Electric Supply Co., electrical supplies	144 00	
Clatworthy & Son, enamel	3 25	
Copp, Clark Co., blotting paper	14 87	
Dean Bros., castings	15 53	
Dominion Photo Supply Co., supplies	10 80	
Driver-Harris Wire Co., wire	24 30	
T. Eaton Co., supplies	37 80	
J. H. Edmunds & Co., spinnings	2 25	
Eimer & Amend, chemicals and supplies	67 42	
Elevator Specialty Co., repairs	16 15	
General Electric Co., argon	12 06	
Goldsmith Bros., wire	10 32	
Hardware Co. of Toronto, hardware	38 00	
Harrington Bros., chemicals	29 20	
Adam Hilger, Ltd., supplies	256 82	
Johnson-Matthey & Co., platinum wire	86 91	
Kimble-Durand Glass Co., tubing, etc.	33 60	
L'Air Liquide Society, gas	30 00	
Lake Simcoe Ice Supply Co., Ice	20 54	
Lester Storage & Cartage Co., cartage	2 60	
Lever Bros., gas	6 00	
Lyman Bros. & Co., chemicals	50 43	
Norman Macdonald, carborundum	3 25	
Prof. J. C. McLennan, disbursements: Cartage and messenger service, $2.30; cable and long distance messages, $1.64; hardware and sundries, $9.75	13 69	
Ontario Laundry Co., laundry	5 05	
Ontario Rubber Co., tubing	30 64	

32. *Physics Building and Department.*—Continued.

W. E. Pain & Sons, plates, prisms, etc.	49 58	
S. L. Pearson & Co., gas and containers	3 60	
Photo-Art Co., supplies	3 51	
Chas. Potter, lenses and holder	4 00	
W. G. Pye & Co., supplies	210 35	
Queen City Glass Co., glass	3 00	
J. G. Ramsay & Co., supplies	6 17	
T. H. Robinson, repairs	6 00	
Sanderson, Pearcy & Co., oils	8 43	
Thermal Syndicate, Ltd., tubes	71 31	
Toronto School Supply Co., mercury, etc.	106 28	
Toronto Salt Works, salt	5 00	
Veeder Mfg. Co., counters	3 01	
Wells Pattern & Machine Works, patterns	7 80	
Wheeler & Bain, copper vessels	10 70	
A. H. Winter-Joyner, repairs	8 00	
University Press, printing and stationery	62 91	
Petty items (18)	18 44	
Freight charges	15 77	
Superintendent's Dept., labour, $18.73; material, $49.04.	67 77	
Apparatus ($1,477.79):		
Cambridge Scientific Instrument Co.	86 22	
Harry W. Cox & Co.	251 36	
Dominion Tungsten Lamp Factory	254 65	
John J. Griffin & Sons	60 90	
Adam Hilger	251 34	
Robt. W. Paul	54 68	
W. G. Pye & Co.	206 16	
Trimount Rotary Power Co.	210 00	
Thompson, Ahearn & Co., brokerage	21 90	
Freight and insurance charges	80 58	
Experimental tables, cases, books, charts, etc. ($497.61)		
Boake Mfg. Co., lumber	50 66	
MacMillan & Co., subscription	7 37	
W. G. Pye & Co., pamphlets	8 86	
L. Rawlinson, re-covering tables	15 00	
R. Robertson & Sons, stone tables	301 54	
Taylor & Francis, copies	32 19	
A. C. Wilson, charts	3 00	
University Press, portfolios, etc.	13 20	
Petty items (2)	1 67	
Superintendent's Dept., labour, $30.89; material, $33.23.	64 12	
Workshop assistance ($326.56):		
Austin Ayre, 21 weeks, 4 days at $6.00 per week	130 36	
F. Mezen, 18 weeks at $6.00 per week	108 00	
G. Wild, 11 weeks, 3 days at $7.70 per week	88 20	
		$4,329 32
		$6,943 78

33. *Sub-Department of Astro-Physics.*

Maintenance ($324.47):		
Art Metropole, supplies	$13 69	
Prof. C. A. Chant, disbursements:		
Painting slides, $4.00; almanacs, $3.00; sundries, $3.65	10 65	
Harvard University, slides	54 00	
D. J. Howell, plates	27 97	
J. L. Jones Engraving Co., map cuts	21 95	
Lyman Bros. & Co., chemicals	16 74	
Photography, Dept. of, slides	7 85	
J. G. Ramsey & Co., supplies	18 24	
Rogers Electric Co., batteries	2 76	
Students' Book Dept., books	35 55	
United Typewriter Co., inspection	75	
Arthur H. Young, frame	5 35	
University Press, binding and stationery	21 05	
Freight charges	1 80	
Superintendent's Dept., labor, $76.25; material, $9.87..	86 12	

33. *Sub-Department of Astro-Physics.*—Continued.

Apparatus ($360.33):		
Bausch & Lomb Optical Co., detector	6 02	
A. W. Betson, book case	21 00	
Betson & Terry, slide trays, etc.	34 25	
Harvard University, frame and scales	50 52	
Rogers Electric Co., wireless apparatus	31 57	
E. Scholey, coupler	4 00	
Topley Co., balopticon	51 75	
Superintendent's Dept., labour, $83.77; material, $77.45.	161 22	
		$684 80

34. *Geological Department.*

Maintenance ($206.19):		
Active Cartage Co., cartage	$0 50	
Adams Furniture Co., chairs	3 00	
National Drug Co., chemicals	2 46	
Office Specialty Mfg. Co., bookcase	22 50	
Prof. W. A. Parks, petty disbursements	4 81	
Photography, Dept. of, slides	44 35	
Students' Book Dept., note books	8 00	
A. T. Thompson & Co., carbons	10 10	
Topley Co., slide box	2 50	
Wisconsin Geological & Natural History Survey, copies	4 05	
University Press, binding, printing and stationery	125 35	
Freight charges	6 60	
Superintendent's Dept., labour, $1.27; material, $18.40.	19 67	
	$253 89	
Less received from students for breakages	47 70	
		$206 19

35. *Mineralogical Department.*

Maintenance ($222.88):		
Art Metropole, set squares	$8 75	
T. Eaton Co., plaster paris	2 50	
Eimer & Amend, crucibles, etc.	13 56	
Foote Mineral Co., specimens	40 20	
Lyman Bros. & Co., chemicals	19 95	
W. F. Petry, bookcase	25 00	
Photography, Dept. of, slides	4 45	
Chas. Potter, gas	2 50	
Remington Typewriter Co., inspection and supplies.	2 50	
Students' Book Dept., books	1 35	
Prof. T. L. Walker, travelling expenses re collection of minerals, $13.71; petty disbursements, $5.05	18 76	
Ward's Natural Science Establishment, specimens	38 58	
Weston Electrical Instrument Co., meters	27 11	
University Press, drawing books, stationery, etc.	22 26	
Freight charges	3 10	
Superintendent's Dept., labor, $9.91; material, $5.11.	15 02	
	$245 59	
Less received from students for breakages	22 71	
		$222 88

36. *Psychological Department.*

Maintenance ($74.88):		
Prof. W. G. Smith, disbursements:		
Chemicals and laboratory supplies, $13.49; repairs and typewriter supplies, $4.10; cleaning, $2.00	$19 59	
Photography, Dept. of, prints	90	
University Press, cards	85	
Superintendent's Dept., labour, $36.80; material, $16.74	53 54	
Laboratory assistance ($200.00):		
V. T. Mooney	200 00	
		$274 88

37. *Mathematical Department.*

Class room supplies ($24.25):		
Photography, Dept. of, slides	$20 00	
University Press, stationery	4 25	
		$24 25

38. *Sub-Department of Mechanics.*

Maintenance ($13.49):		
Hardware Co. of Toronto, hardware	$5 56	
University Press, stationery	2 25	
Superintendent's Dept., labour, $2.95; material, $2.73	5 68	
		$13 49

39. *Political Science.*

Class room supplies ($34.60):		
University Press, printing Lefroy's "History of Institutes of Roman Law" ($81.50, less paid in 1914-15, $65.00) $16.50; stationery, $15.30	$31 80	
Superintendent's Dept., labour, $1.90; material, 90c.	2 80	
		$34 60

40. *History.*

Class room supplies ($32.46):		
University Press, printing and stationery	$32 25	
Superintendent's Dept., material	21	
		$32 46

41. *Italian and Spanish.*

Class room supplies ($1.25):		
T. Eaton Co., exercise books	$1 25	
		$1 25

42. *University College Departments.*

Greek ($13.70):	
J. T. Luton, books	$12 00
Photography, Dept. of, prints	1 70
Latin ($2.30):	
Photography, Dept. of, prints	1 70
University Press, cards	60
Ancient History: (nothing spent).	
English ($275.15):	
University Press, stationery	$16 65
Reading Essays:	
Mrs. P. Cudmore	38 50
Mrs. Mabel Hincks	135 00
Mrs. M. Wallace	85 00
French ($32.90):	
Photography, Dept. of, slides	2 75
Prof. J. Squair, book purchased	50
Students' Book Dept., books	19 70
University Press, stationery	9 95
German: (nothing spent).	
Orientals ($42.25):	
Photography Dept. of, prints	1 25
Students' Book Dept., books	40 30
University Press, tacks	70

42. *University College Departments.*—Continued.

Ethics ($18.01):		
University Press, stationery and supplies	17 51	
Superintendent's Dept., material	50	
General Expenses:		
Stationery and printing ($40.00):		
The Bursar, postage supplied	15 00	
University Press, printing and stationery	25 00	
Advertising ($7.98):		
Evening Telegram	3 78	
News Publishing Co.	1 68	
Toronto Daily Star	2 52	
Incidentals ($19.60):		
Toronto Weekly Railway and Steamboat Guide Co., subscription to "Guide"	2 60	
Robt. M. Williams, illuminating address re Knox College.	17 00	
		$451 89

43. *World History.*

(Nothing spent.)

44. *Trinity College Service.*

The Bursar, Trinity College, students' car fares for transportation to University lectures	$467 28	
		$467 28
		$283,510 68

III. Faculty of Medicine.

46. *Salaries.*

Anatomy:		
J. P. McMurrich, Professor, 12 mos. to 30th June	$4,000 00	
J. C. Watt, Lecturer (Sessional), $1,800; additional course in Topographical Anatomy, $200	2,000 00	
Assistants (Sessional):		
C. J. Copp	150 00	
N. D. Frawley (paid also in Gynæcology)	150 00	
E. R. Hooper	150 00	
O. A. McNichol	150 00	
Wallace A. Scott (paid also in Surgery—war service).	150 00	
C. B. Shuttleworth (paid also in Surgery)	150 00	
G. E. Wilson (paid also in Surgery—war service)	150 00	
G. R. Philp (war service)	100 00	
H. W. Baker	50 00	
R. E. Gaby (paid also in Surgery—war service)	50 00	
T. R. Hanley (paid also in Therapeutics)	50 00	
R. Home (war service from Nov., 1915)	50 00	
J. H. McPhedran (paid also in Medicine—war service)	50 00	
C. B. Parker	50 00	
F. R. Scott	50 00	
William A. Scott (Michælmas Term—paid also in Obstetrics)	25 00	
Geraldine Oakley (Easter Term)	25 00	
H. M. Tovell (paid also in Pathology)	50 00	
W. H. Nelson	50 00	
Technical Assistant at $436 per annum:		
Miss O. E. Pedley, 1 mon. to 31st July, resigned	36 33	
Miss Hesba Pedley, 15th Sept. to 30th June, resigned	345 17	
G. Lynne, Attendant, Dissecting Room, 12 mos. to 30th June	850 00	
		$8,881 50

46. *Salaries.*—Continued.

Pathology and Bacteriology:		
J. J. Mackenzie, Professor, 12 mos. to 30th June (war service), $3,800 less deduction for substitutes, $550....	3,250 00	
O. R. Mabee, Temporary Head of Department (paid also in Surgery)	250 00	
D. Graham, Lecturer (Sessional) at $2,000 (war service—half pay)	1,000 00	
H. K. Detweiler, Temporary Instructor (Easter Term—paid also from Medical Research Fund)	650 00	
W. L. Robinson, Fellow (Sessional) at $500, resigned 1st Feb.)	250 00	
Assistants (Sessional):		
J. A. Oille (paid also in Medicine)	150 00	
G. A. Campbell (war service)	100 00	
L. B. Robertson (war service)	100 00	
H. J. Shields (war service)	100 00	
J. C. Beatty	50 00	
R. Graham (paid also in Surgery)	50 00	
G. W. Lougheed	50 00	
W. F. McPhedran (paid also in Medicine and from Medical Research Fund)	50 00	
R. W. Naylor	50 00	
F. S. Park (paid also in Medicine—war service)	50 00	
H. M. Tovell (paid also in Anatomy)	50 00	
D. H. Boddington, Assistant in Clinical Laboratory (Sessional—paid also in Chemical Pathology)	125 00	
Laboratory Assistants, each 12 mos. to 30th June:		
A. Wilson, at $750 (of which $350 charged as Caretaker of Pathological building)	400 00	
F. Thibault	650 00	
Laboratory Attendant for preparing media, at $35 a month:		
R. Birrell, 1st July to 30th Sept.	105 00	
C. Dixon, 1st Oct. to 15th Jan'y	122 50	
Miss B. Cotton, 17th Jan'y to 30th June	191 33	
Miss I. E. Ruttan, Stenographer, 12 mos. to 30th June....	700 00	
		$8,493 83
Chemical Pathology:		
Andrew Hunter, Professor, 12 mos. to 30th June	$3,600 00	
C. Imrie, Lecturer (Sessional) at $1,600 (war service—half pay)	800 00	
W. R. Campbell, Demonstrator (Sessional), substitute for Imrie	750 00	
F. W. Rolph, Demonstrator, $500; Assistant in Clinical Laboratory, $250 (Sessional); remuneration for Summer Session, $72.50	822 50	
D. H. Boddington, Assistant in Clinical Laboratory (Sessional—paid also in Pathology)	125 00	
Laboratory Assistant:		
A. Husband, at $650, war service, balance after payment of substitute	150 00	
T. Richardson, substitute, 12 mos. salary	500 00	
Mrs. M. Davis, Laboratory Attendant, 52 weeks at $5	260 00	
		$7,007 50
Pharmacy and Pharmacology:		
V. E. Henderson, Associate Professor at $2,800, to 29th Feb., $1,866.66; war service, half pay from 1st March, $466.67	$2,333 33	
J. A. Macdonald, Instructor (Sessional)	200 00	
Class Assistants (Sessional):		
F. C. Harrison	75 00	
C. V. Pratt	50 00	
E. M. Henderson	25 00	
T. James, Laboratory Assistant, 12 mos. to 30th June....	700 00	
		$3,383 33

46. *Salaries.*—Continued.

Clinical Departments:
Medicine and Clinical Medicine ($6,645):
Associates, each 12 mos. to 30th June:

W. J. McCollum	300 00
J. H. Elliott	300 00
H. C. Parsons (Clinical Medicine only—war service)	300 00
D. McGillivray (war service)	300 00
G. W. Howland	300 00
H. S. Hutchison	300 00

Demonstrators (Sessional):

E. C. Burson (war service)	250 00
F. A. Clarkson	250 00
J. S. Graham	250 00
R. W. Mann	250 00
A. J. Mackenzie (war service)	250 00
J. H. McPhedran (paid also in Anatomy—war service)	250 00
C. S. McVicar (war service)	250 00
B. O'Reilly	250 00
G. W. Ross (paid also in Therapeutics)	250 00
D. K. Smith (war service)	250 00
G. S. Strathy (war service)	250 00
C. J. Wagner	250 00
G. S. Young, $250; remuneration for Summer Session, $72.50	322 50
Alan Brown	200 00
A. W. Canfield	200 00
W. F. McPhedran (paid also in Pathology and from Medical Research Fund)	200 00

Assistants (Sessional):

G. F. Boyer (war service)	150 00
J. D. Loudon	150 00
J. A. Oille, $150; remuneration for Summer Session, $72.50 (paid also in Pathology)	222 50
M. B. Whyte	150 00
G. Bates	50 00
F. S. Minns (paid also from Med. Research Fund)	50 00
T. J. Page	50 00
F. S. Park (paid also in Pathology—war service)	50 00
E. Trow	50 00

Surgery and Clinical Surgery ($5,146.58):
Associates; each 12 mos. to 30th June:

C. B. Shuttleworth (paid also in Anatomy)	300 00
J. F. Uren	300 00
T. B. Richardson (war service)	300 00
G. Silverthorn	300 00
E. S. Ryerson (paid also as Assistant Secretary to Faculty—war service)	300 00
W. J. O. Malloch (war service)	300 00
Wallace A. Scott (paid also in Anatomy—war service)	300 00
W. W. Jones	300 00

Demonstrators (Sessional):

M. H. V. Cameron	250 00
R. E. Gaby (paid also in Anatomy—war service)	250 00
W. E. Gallie	250 00
J. A. Roberts (war service)	250 00
N. S. Shenstone, $250; remuneration for Summer Session, $72.50	322 50
G. E. Wilson (paid also in Anatomy—war service)	250 00
A. B. Wright	250 00

Assistants (Sessional):

A. S. Moorhead, $150; remuneration for Summer Session, $72.50	222 50
D. E. Robertson (war service)	100 00

46. *Salaries.*—Continued.

F. A. Cleland (paid also in Gynæcology)	50 00	
R. Graham (paid also in Pathology)	50 00	
O. R. Mabee (paid also in Pathology)	50 00	
J. A. McCollum	50 00	
P. K. Menzies (war service)	50 00	
B. Z. Milner	50 00	
R. Pearse (war service)	50 00	
A. H. Perfect	50 00	
Laboratory Attendant, half time, balance in Physiology:		
L. Jackson	156 33	
F. Scruby	25 00	
Mrs. Ashdown	20 25	
Obstetrics and Gynæcology ($2,845):		
Associates, each 12 mos to 30th June:		
F. A. Cleland, Gynæcology (paid also in Surgery)	300 00	
W. B. Hendry, Gynæcology (war service)	300 00	
J. A. Kinnear, Obstetrics, $300; remuneration for Summer Session, $72.50	372 50	
Demonstrators (Sessional):		
(*a*) Obstetrics:		
M. M. Crawford (war service from 22 Jan'y)	250 00	
W. J. Mabee	250 00	
S. J. N. Magwood (war service)	200 00	
(*b*) Gynæcology:		
A. C. Hendrick	250 00	
Helen MacMurchy (without salary)	.....	
Assistants (Sessional):		
William A. Scott, $50; remuneration for Summer Session, $72.50 (paid also in Anatomy)	122 50	
J. G. Gallie, Obstetrics (war service)	100 00	
N. D. Frawley, Gynæcology, $50; Obstetrics, without salary; (paid also in Anatomy)	50 00	
R. W. Wesley, Gynæcology	50 00	
H. E. Clutterbuck (war service)	.....	
A. Johnston, Laboratory Attendant, 12 mos. to 30th June	600 00	
Ophthalmology ($472.50):		
Assistants (Sessional):		
C. Campbell	150 00	
D. N. Maclennan, $150; remuneration for Summer Session, $72.50	222 50	
M. Lyon	50 00	
W. W. Wright	50 00	
Oto-Laryngology ($400):		
Demonstrators (Sessional):		
P. Goldsmith (war service)	200 00	
G. Royce (war service)	200 00	
Therapeutics ($800):		
C. E. C. Cole, Demonstrator (Sessional—war service)	200 00	
Assistants (Sessional):		
G. W. Ross (paid also in Medicine)	150 00	
S. R. D. Hewitt (war service)	50 00	
W. V. Watson	50 00	
S. Johnston, Demonstrator, Anaesthesia (Sessional)	250 00	
Assistants, Anaesthesia (Sessional):		
T. R. Hanley (paid also in Anatomy)	50 00	
M. D. McKichan	50 00	
Psychiatry ($75):		
J. M. Forster, Associate, 12 mos. to 30th June	50 00	
H. Clare, Demonstrator (Sessional)	25 00	
Dental Surgery ($50):		
A. D. A. Mason, Demonstrator (Sessional)	50 00	
		$16,434 08
Associate Professors, each 12 mos. to 30th June:		
H. B. Anderson, Clinical Medicine (without salary in 1915-16)	.....	
A. M. Baines, Clinical Medicine	$700 00	
G. A. Bingham, Clinical Surgery, etc.	700 00	

46. *Salaries.*—Continued.

H. A. Bruce, Clinical Surgery, etc.	700 00	
J. T. Fotheringham, Medicine and Clinical Medicine (war service)	700 00	
A. Primrose, Clinical Surgery (paid also as Secretary to Faculty—war service)	700 00	
F. N. G. Starr, Clinical Surgery	600 00	
W. B. Thistle, Clinical Medicine	600 00	
G. Chambers, Clinical Medicine (war service)	450 00	
R. J. Dwyer, Clinical Medicine	450 00	
A. R. Gordon, Clinical Medicine (war service)	450 00	
H. T. Machell, Obstetrics, etc.	450 00	
W. McKeown, Clinical Surgery (war service)	450 00	
C. L. Starr, Clinical Surgery	450 00	
K. C. McIllwraith, Obstetrics, etc., $450; remuneration for Summer Session, $72.50	522 50	
W. Goldie, Clinical Medicine (paid also from Medical Research Fund)	350 00	
F. W. Marlow, Obstetrics, etc., (war service)	350 00	
G. Boyd, Oto-Laryngology	350 00	
J. Ferguson, Clinical Medicine	350 00	
S. M. Hay, Clinical Surgery	350 00	
A. A. Macdonald, Obstetrics, etc.	350 00	
J. G. Fitzgerald, Hygiene (paid also as Director of Antitoxin Laboratory	350 00	
		$10,372 50
Professors, each 12 mos. to 30th June:		
I. H. Cameron, Surgery and Clinical Surgery, (war service)	$1,050 00	
A. McPhedran, Medicine and Clinical Medicine	1,050 00	
J. A. Amyot, Hygiene (war service)	2,000 00	
R. D. Rudolf, Therapeutics (war service)	1,000 00	
B. P. Watson, Obstetrics and Gynæcology (war service)	1,000 00	
N. A. Powell, Medical Jurisprudence, etc.	700 00	
D. J. G. Wishart, Oto-Laryngology	700 00	
J. M. MacCallum, Ophthalmology	700 00	
G. S. Ryerson, Ophthalmology, etc.	450 00	
G. H. Burnham, Ophthalmology, etc.	450 00	
C. K. Clarke, Psychiatry, (also Dean of Faculty)	450 00	
N. H. Beemer, Mental Diseases (extra-mural, without salary)	.....	
		$9,550 00

Secretary's Office.

A. Primrose, Secretary to Faculty, 12 mos. to 30th June (paid also as Associate Professor—war service)	$500 00	
E. S. Ryerson, Assistant Secretary, 12 mos. to 30th June (paid also in Surgery—war service)	500 00	
Miss E. A. Jamieson, Assistant, 12 mos. to 30th June	1,150 00	
Stenographers:		
Miss O. Russel, 12 mos. to 30th June	550 00	
Miss I. M. Thomas, 20 weeks at $10	200 00	
		$2,900 00
		$67,022 74
Less Summer Session remuneration charged to fees		622 00
		$66,400 74

47. *Retiring Allowances.*

Retiring allowances to Emeritus Professors (limited to five annual payments):		
A. H. Wright (fourth payment)	$250 00	
G. R. McDonagh (second payment)	250 00	
		$500 00

48. *Anatomical Department.*

Anatomical material ($1,327 50):		
W. E. Baycroft	$48 00	
Blachford & Son	16 00	
J. A. Grobb	32 00	
Albert Ingram	32 00	
A. W. Lamacroft	30 00	
F. W. Matthews	385 50	
George Morse	48 00	
Patterson & Dart	16 00	
H. R. Ranks	432 00	
J. K. Shinn	48 00	
Wm. Speers	240 00	
Material for preservation, chemicals, etc. ($306.20):		
W. R. Brock Co., cloth	7 01	
Ingram & Bell, chemicals	180 57	
Inland Revenue Dept., methylated spirits, $50.05; less barrels returned, $11.85	38 20	
Sanderson Pearcy & Co., oils	5 39	
Freight charges	4 19	
Superintendent's Dept., labor, $40.37; material, $30.47	70 84	
Incidentals ($125.07):		
Geo. M. Hendry Co., blackboard, etc.	11 23	
Hudson-Parker, Ltd., frocks	33 75	
Toronto General Hospital, photographs	4 00	
L. W. Trull, foetus	3 00	
United Typewriter Co., inspection	6 75	
University Press, record books and stationery	37 10	
Freight charges	2 09	
Superintendent's Dept., labour, $16.11; material, $11.04	27 15	
	$1,758 77	
Less sundry credits:		
Architecture Dept., methylated spirits supplied	2 50	
		$1,756 27

49. *Pathology and Bacteriology.*

Chemicals and supplies ($733.84):		
Canadian Carbonate Co., gas	$54 00	
J. Coots, fodder	6 00	
T. Eaton Co., cotton and supplies	5 32	
Ingram & Bell, chemicals and supplies	234 69	
Inland Revenue Dept., methylated spirits, $49.92; less barrels returned, $11.85	38 07	
Mrs. N. A. C. Lobb, animals	3 50	
Dr. O. R. Mabee, disbursements:		
Food for animals, $15.05; postage and car fares, $12.14; sundries, $2.81	30 00	
John McGillian, fodder	131 00	
Ontario Laundry Co., laundry	44	
Geo. Sparrow & Co., boiler	5 00	
Wm. Staughton, fodder	104 97	
United Typewriter Co., inspection	4 50	
University Press, drawing paper and stationery	51 10	
Freight charges	2 67	
Superintendent's Dept., labor, $25.93; material, $36.65	62 58	
Apparatus ($236.33):		
J. F. Hartz Co., lamp	4 50	
Ingram & Bell, apparatus	168 07	
Lowe-Martin Co., cabinet, etc.	44 26	
Richards Bros., boxes	3 50	
Superintendent's Dept., labor, $13.28; material, $2.72	16 00	
Care of Refrigerating Plant ($150.00):		
Toronto General Hospital	150 00	
	$1,120 17	

49. *Pathology and Bacteriology.*—Continued.

Less sundry credits:			
Maintenance of animals:			
Dept. of Medical Research	$75 00		
Synthetic Drug Co.	37 00		
Toronto General Hospital, alcohol	96 44		
Dept. of Militia and Defence, soap	3 25		
		211 69	
			$908 48

50. *Chemical Pathology.*

Supplies ($367.99):			
J. T. Baker Chemical Co., chemicals		$104 89	
Mrs. M. Davis, 1 week's extra services as laboratory attendant		5 00	
Grand & Toy, envelopes		3 50	
Prof. A. Hunter, disbursements:			
Laboratory supplies, $17.05; rubber stamps, stationery, etc., $14.20; postage, $4.56; hardware, $2.69; rent of typewriter, $1.50	$40 00		
Less charged in 1914-15	20 00		
		20 00	
Ingram & Bell, chemicals and supplies		74 42	
Lowe-Martin Co., folders		2 50	
Lyman Bros. & Co., chemicals		8 65	
Ontario Rubber Co., tubing		8 00	
Sadler & Haworth, repairs to belting		8 68	
Arthur H. Thomas Co., chemicals		63 72	
University Press, cards and stationery		22 85	
Petty items (4)		4 94	
Freight charges		9 14	
Superintendent's Dept., labor, $21.00; material, $10.70		31 70	
Apparatus ($735.16):			
Baird & Tatlock (London), Ltd., scales, glassware and thermometers		348 93	
Andrew H. Baird, apparatus		275 31	
Robert Elder Carriage Works, stand		4 25	
Ingram & Bell, apparatus		32 30	
Lenz & Naumann Inc., apparatus		63 58	
Freight charges		6 52	
Superintendent's Dept., material		4 27	
			$1,103 15

51. *Pharmacy and Pharmacology.*

Supplies and apparatus ($297.49):			
Aikenhead Hardware, hardware		$19 51	
Beaver Flint Glass Co., test tubes		15 50	
Burroughs, Wellcome & Co., chemicals		52 62	
Christie, Brown & Co., fodder		7 25	
Eimer & Amend, cylinders		7 51	
J. A. Fontaine, frogs		30 00	
Harvard Apparatus Co., axles		1 75	
Prof. V. E. Henderson, disbursements:			
Laundry, etc., $5.60; towels, $4.88; hardware, oils, etc., $4.04; sundries, $4.85		19 37	
Ingram & Bell, chemicals and supplies		9 88	
National Drug Co., chemicals		55 07	
Ontario Rubber Co., tubing		4 98	
Purity Distilling Co., alcohol		21 59	
Wm. Staughton, fodder		9 00	
Toronto Dog and Cat Hospital, animals		23 70	
University Press, stationery		4 35	
Freight charges		4 56	
Superintendent's Dept., labor, 67c.; material, $18.28		18 95	
		$305 59	
Less received from sale of pamphlets		8 10	
			$297 49

52. *Medicine.*

Charts, apparatus, microscopes, etc. ($97.69):		
Doane Bros., cab hire *re* treatments	$2 00	
T. Eaton Co., apparatus	21 64	
Ingram & Bell, apparatus	10 55	
F. D. Mēzen, micrometer	3 50	
Pathological Dept. Microscopes Account, microscope	60 00	
		$97 69

53. *Surgery.*

Supplies and laboratory expenses ($21.42):		
B. J. Fenner, slides	$6 50	
Ingram & Bell, supplies	14 92	
		$21 42

54 and 55. *Obstetrics and Gynaecology.*

Supplies ($170.46):		
J. F. Hartz Co., chemicals	$3 40	
Ingram & Bell, glassware and chemicals	102 01	
McAinsh & Co., book	5 50	
Miller Mfg. Co., coats	10 50	
Richards Bros., clips	1 50	
Dr. W. A. Scott, petty disbursements	8 53	
Oliver Spanner & Co., repairs	3 00	
H. C. Tugwell & Co., trimmer, filters, etc.	29 67	
University Press, labels and stationery	6 35	
		$170 46

56. *Ophthalmology.*

Supplies and apparatus ($60.00):		
A. Lismer, diagrams	$60 00	
		$60 00

57. *Oto-Laryngology.*

Supplies and apparatus ($16.10):		
J. F. Hartz Co., sterilizer	$10 00	
Students' Book Dept., book	6 10	
		$16 10

58. *Therapeutics.*

Supplies and apparatus ($51.30):		
Ingram & Bell, apparatus	$23 00	
University Press, printing	28 30	
		$51 30

59. *Hygiene.*

Supplies and apparatus ($394.59):		
J. F. Hartz Co., microscopes and apparatus	$192 80	
Ingram & Bell, autoclave and supplies	187 54	
St. John's Ambulance Association, medical supplies	14 25	
Occasional Assistance ($150.00):		
Wm. Knowles	100 00	
Miss O. Sheringham	50 00	
		$544 59

60. *Medical Jurisprudence.*

(Nothing spent.)

61. *Medical Building.*

Heat and light (supplied from Central Power Plant):		
Gas, city current and occasional fuel ($342.30):		
Consumers' Gas Co.	$342 30	

61. *Medical Building.*—Continued.

Water ($306.35):		
City Treasurer	306 35	
Caretaker's supplies ($109.99):		
Superintendent's Dept., material	109 99	
Cleaning ($868.54):		
Allen Mfg. Co., laundry	2 08	
Canadian Cleaning Co., cleaning windows	40 00	
Ontario Laundry Co., laundry	2 06	
Superintendent's Dept., labor	824 40	
Repairs and renewals ($822.13):		
Wm. Bartlett & Son, shades	12 36	
Wm. Card, exterminating rats	7 50	
Forbes Roofing Co., repairs to roof	13 09	
A. Matthews, repairs to roof	85 10	
Routery Bros., plastering	42 50	
Superintendent's Dept., labor, $462.54; material, $199.04	661 58	
	$2,449 31	
Less sundry credits; repairs	5 40	
	$2,443 91	
Caretaker, Thos. Motton, 12 mos. to 30th June	800 00	
		$3,243 91

62. *Pathological Building.*

Heat and light (supplied from Hospital Plant):		
(No payment in 1915-16, pending adjustment of accounts):		
Gas and city current ($450.10):		
Consumers' Gas Co.	$450 10	
Water ($66.85):		
City Treasurer	66 85	
Caretaker's supplies ($105.54):		
Superintendent's Dept., material	105 54	
Cleaning ($645.67):		
Allen Mfg. Co., laundry	6 12	
Canadian Cleaning Co., cleaning windows	24 00	
Ontario Laundry Co., laundry	4 16	
Superintendent's Dept., labor	611 39	
Repairs and renewals ($507.00):		
Aikenhead Hardware, padlock	1 38	
City Treasurer, elevator license	10 00	
Turnbull Elevator Mfg. Co., repairs to elevator	24 75	
Superintendent's Dept., labor, $319.92; material, $150.95	470 87	
	$1,775 16	
Less sundry credits: repairs	75	
	$1,774 41	
Caretaker, Alex. Wilson, 12 mos. to 30th June, $750.00 (of which $400.00 charged as laboratory attendant)	350 00	
		$2,124 41

63. *General Expenses.*

Stationery, printing, postage and office supplies ($1,064.44):	
American Medical Association, medical directory	$8 06
The Bursar, postage supplied	227 70
Canadian Pacific Railway Co.'s Telegraph, cablegrams to Europe *re* faculty work	18 73
C. Gripton, rubber stamps	4 10
Might Directories, city directory	10 00
United Typewriter Co., typewriter, $95.00; inspection and supplies, $26.00	121 00
University Press, calendar, printing and stationery	672 60
Freight charges	1 50

63. *General Expenses.*—Continued.

Superintendent's Dept., labor, 68c.; material, 7c.	75	
E. R. C. Clarkson & Sons for account of Lintz-Porter Co., wiring in laboratory at St. Michael's Hospital	76 42	
Appropriation for Dean's Office ($550.00):		
Dr. C. K. Clarke, for disbursements by him	550 00	
		$1,690 86

Special Fund for Medical Research.

Salaries ($4,565.23):		
W. Goldie, Director of Medical Clinic of Out-patient Department, 5 mos. to 30th Nov., at $2,000.00 (paid also as Associate Professor)	$833 32	
Research Fellows:		
W. F. McPhedran, 3 mos. to 30th Sept., at $1,500.00 (paid also in Pathology and Medicine)	375 00	
A. Bruce Macallum, 12 mos. to 30th June	1,200 00	
H. K. Detweiler, 1st July to 31st Dec., at $1,000.00, $500.00; 1st Jan. to 31st May, at $850, $266.66; June, at $1,200.00, $100.00 (paid also in Pathology)	866 66	
F. S. Minns, 11 mos. to 31st May, at $50.00 a month (paid also in Medicine)	550 00	
Miss A. Homer, 1st July to 31st Aug., half time, at $750.00, $125.00; 1st Sept. to 31st Dec., at $125.00 a month, $500.00 (paid also in Antitoxin Laboratory)	625 00	
C. Greenwood, Laboratory Attendant, 1st July to 9th Oct., at $35.00 a month	115 25	
Laboratory expenses and equipment ($300.78):		
American Pure Yeast Co., yeast	10 10	
Booth-Coulter Copper & Brass Mfg. Co., apparatus	62 35	
Crofton Storage Battery Co., battery	15 00	
Eimer & Amend, balances, etc.	41 80	
Emil Greiner Co., apparatus	31 25	
J. F. Hartz Co., chemicals	1 00	
Gowans, Kent & Co., egg cups	3 86	
Lenz & Naumann Inc., porcelain bowl	12 10	
Lever Bros., gas	3 00	
G. E. Leworthy, glass-blowing	11 10	
Lyman Bros. & Co., chemicals	4 22	
Pilkington Bros., glass plates	5 30	
Rogers Electric Co., motor	15 00	
Felix Spitzner, yeast	5 05	
C. Stewart, centrifuge and repairs	27 00	
Toronto Dog and Cat Hospital, animals	8 30	
Freight charges	6 28	
Superintendent's Dept., labor, $27.89; material, $10.18	38 07	
Special supplies appropriation ($120.98):		
Miss A. Homer, petty disbursements	6 68	
Ingram & Bell, syringes	22 70	
W. R. Linton, animals	5 75	
Mrs. N. A. C. Lobb, animals	7 30	
Pathology, Dept. of, maintenance of animals used in research work by Dr. Detweiler	75 00	
Petty items (2)	2 60	
Freight charges	95	
Charged to Medical Research Fund (Schedule 4a)	$4,986 99	
		$78,986 87

IV. Faculty of Applied Science.

64. *Salaries.*

Electrical Engineering.

T. R. Rosebrugh, Professor, 12 mos. to 30th June	$3,800 00	
H. W. Price, Associate Professor, 12 mos. to 30th June	2,600 00	
Lecturers (Sessional):		
W. S. Guest	1,500 00	
A. R. Zimmer	1,400 00	
Demonstrators (Sessional):		
R. Taylor	1,000 00	
R. J. Allen	900 00	
W. B. Buchanan	900 00	
H. O. Merriman, at $800 (resigned in December)	300 00	
A. C. Ross, substitute for balance of Session	457 00	
Electricians:		
F. Robbins, 12 mos. to 30th June	800 00	
W. R. McKee, Assistant, 24th Sept. to 30th June, at $600 per annum	461 30	
A. Cunningham, Laboratory Attendant, 27th Sept. to 30th June. $425 per annum	323 34	
		$14,441 64

Mechanical Engineering.

R. W. Angus, Professor, 12 mos. to 30th June	$3,200 00	
Lecturers (Sessional):		
L. M. Arkley	2,000 00	
J. J. Traill	1,800 00	
J. T. Lagergren, Machine Design	1,800 00	
J. H. Parkin	1,300 00	
Demonstrators (Sessional):		
D. J. Thomson, Thermodynamics	900 00	
J. Dibblee, Hydraulics	800 00	
F. Hickey, Machinist, 10 mos. salary	850 00	
R. Fullerton, Engineer of Experimental Plant, 12 mos. to 30th June	750 00	
R. Kenmare, Laboratory Fireman, 8 mos. salary	480 00	
G. S. Laing, Laboratory Assistant, 12 mos. to 30th June	720 00	
		$14,600 00

Applied Mechanics.

Associate Professors, each 12 mos. to 30th June:		
J. McGowan	$3,100 00	
P. Gillespie	2,600 00	
Assistant Professors, each 12 mos. to 30th June:		
C. R. Young	2,300 00	
A. T. Laing (part time—paid also as Secretary to Faculty)	600 00	
Demonstrators (Sessional):		
R. J. Marshall	1,100 00	
J. S. Mitchell	800 00	
W. K. Simpson, Mechanician, 12 mos. to 30th June	1,200 00	
F. F. Hitchcock, Laboratory Attendant, 9 mos. salary	405 00	
		$12,105 00

Mining Engineering.

H. E. T. Haultain, Professor, 12 mos. to 30th June	$3,700 00	
Lecturers (Sessional):		
F. C. Dyer	1,400 00	
J. T. King	1,300 00	
E. Tozer, Laboratory Assistant, 12 mos. to 30th June	700 00	
M. O'Bryan, Laboratory Attendant, 9 mos. salary	300 00	
		$7,400 00

64. *Salaries.*—Continued.

Metallurgical Engineering.

G. A. Guess, Professor, 12 mos. to 30th June	$3,600 00	
J. Rachwalski, Laboratory Attendant, 8 mos. salary	480 00	
		$4,080 00

Ferro-Metallurgy.

T. R. Loudon, Assistant Professor, 12 mos. to 30th June	$2,200 00	
		$2,200 00

Surveying.

L. B. Stewart, Professor, 12 mos. to 30th June	$3,800 00	
W. M. Treadgold, Assistant Professor, 12 mos. to 30th June	2,300 00	
Lecturers (Sessional):		
S. R. Crerar	1,800 00	
E. W. Banting	1,500 00	
J. T. Ransom, Demonstrator (Sessional)	900 00	
		$10,300 00

Applied Chemistry.

W. H. Ellis, Professor (also Dean of Faculty), 12 mos. to 30th June	$4,000 00	
J. W. Bain, Associate Professor, 12 mos. to 30th June	3,100 00	
Assistant Professors, each 12 mos. to 30th June:		
E. G. R. Ardagh, Analytical Chemistry	2,300 00	
M. C. Boswell, Organic Chemistry	2,300 00	
L. J. Rogers, Demonstrator (Sessional)	1,100 00	
A. R. Duff, Fellow (Sessional)	500 00	
H. M. Lancaster, Lectures in Sanitary Chemistry (Sessional—part time)	300 00	
G. E. Leworthy, Lecture Assistant and Glassblower (Sessional)	750 00	
D. Sinclair, Laboratory Assistant, 12 mos. to 30th June	950 00	
R. Spence, Laboratory Attendant, 1st July to 29th Feb., at $350 per annum (resigned)	233 32	
		$15,533 32

Electro-Chemistry.

J. T. Burt-Gerrans, Lecturer (Sessional)	$1,500 00	
H. J. Brownlee, Demonstrator (Sessional)	900 00	
R. Deacon, Laboratory Attendant, 8 mos. salary	200 00	
		$2,600 00

Architecture.

C. H. C. Wright, Professor, 12 mos. to 30th June	$3,800 00	
A. W. McConnell, Assistant Professor, at $2,200, to 31st Dec., $1,100; war service, half pay from 1st January, $550	1,650 00	
J. M. Lyle, Instructor in Architectural Design (Easter Term), substitute for Prof. McConnell	500 00	
H. H. Madill, Lecturer (Sessional)	1,200 00	
J. L. Banks, Instructor in Modelling (Sessional—part time)	600 00	
C. W. Jefferys, Instructor in Freehand Drawing, and Water Color (Sessional—part time)	700 00	
Miss J. C. Laing, Instructor, etc., 12 mos. salary	750 00	
		$9,200 00

Drawing.

C. H. C. Wright, Professor (paid as Professor of Architecture)	.....	
J. R. Cockburn, Assistant Professor, Descriptive Geometry, at $2,300, to 29th February, $1,533.32; war service, half pay from 1st March, $383.34	$1,916 66	
W. J. Smither, Lecturer in Structural Engineering (Sessional)	1,200 00	

64. *Salaries.*—Continued.

Demonstrators (Sessional):		
L. T. Rutledge	1,100 00	
F. E. Watson	1,000 00	
L. A. Badgley	900 00	
J. S. Galbraith, at $900, Michaelmas Term, $337.50; war service, half pay, Easter Term, $281.25	618 75	
J. T. Howard	900 00	
W. H. Martin	900 00	
W. J. T. Wright	900 00	
F. C. Mechin	800 00	
Attendants in Drafting Rooms:		
G. Brown, nine mos. salary	500 00	
Miss Aileen Hanlan, 26 weeks at $10	260 00	
		$10,995 41

Engineering Physics and Photography.

G. R. Anderson, Associate Professor, 12 mos. to 30th June	$2,600 00	
G. L. Wallace, Demonstrator (Sessional)	1,000 00	
A. C. Wilson, Fellow (Sessional)	500 00	
Photographers:		
A. J. Burge, 9 mos. salary	600 00	
E. Collier, Assistant, 2 mos. at $65	130 00	
C. Crowther, Assistant, 8 weeks at $10, $80; 18 weeks at $12, $216	296 00	
		$5,126 00

Special Lectures.

Lecturers in Accountancy (Sessional):		
W. S. Ferguson	600 00	
J. M. Langstaff (war service)	.....	
J. W. Pickup, substitute for Langstaff	400 00	
		$1,000 00

Secretary's Office.

A. T. Laing, Secretary to Faculty and Librarian, 12 mos. to 30th June (paid also as Assistant Professor of Applied Mechanics)	$2,000 00	
Miss F. McMechan, Assistant to Secretary, 12 mos. to 30th June	850 00	
Stenographers:		
Miss R. Cave, 12 mos. to 30th June	700 00	
Miss E. Myers, 10 mos. salary	480 00	
		$4,030 00
		$113,611 37

65. *Chemistry and Mining Building.*

Heat and light (supplied from Central Power Plant):	
Gas, city current and occasional fuel ($412.09):	
Consumers' Gas Co.	$412 09
Water ($166.08):	
City Treasurer	166 08
Caretaker's supplies ($156.00):	
Superintendent's Dept., material	156 00
Cleaning ($1,500.66):	
Allen Mfg. Co., laundry	3 14
Canadian Cleaning Co., cleaning windows	36 00
Ontario Laundry Co., laundry	3 58
Superintendent's Dept., labour	1,457 94
Repairs and renewals ($1,702.63):	
Wm. Bartlett & Son, shades	30 50
Wm. Card, exterminating rats	7 50
City Treasurer, elevator licenses	10 00

65. *Chemistry and Mining Building.*—Continued.

Forbes Roofing Co., repairs to roof	21 31	
A. Matthews, repairs to roof	100 00	
Ryrie Bros., repairs to clock	3 00	
Superintendent's Dept., labour, $891.25; material, $639.07.	1,530 32	
	$3,937 46	
Less sundry credits: cleaning, $18.00; repairs, $40.25..	58 25	
	$3,879 21	
Caretaker, E. Bishop, 12 mos. to 30th June	950 00	
Messengers at $4 to $4.50 per week ($215.80):		
H. Raynor, 28 weeks, 4 days	129 00	
Kenneth Cox, 9 weeks, 4½ days	43 88	
F. Nicholson, 10 weeks, 1 day	40 67	
G. Kendall, 3 days	2 25	
		$5,045 01

66. *Engineering Building.*

Heat and light (supplied from Central Power Plant).		
Gas, city current and occasional fuel ($56.42):		
Consumers' Gas Co.	$56 42	
Water ($34.74):		
City Treasurer	34 74	
Caretaker's supplies ($124.31):		
Superintendent's Dept., material	124 31	
Cleaning ($1,469.60):		
Canadian Cleaning Co., cleaning windows	35 00	
Petty items (2)	1 21	
Superintendent's Dept., labour	1,433 39	
Repairs and renewals ($776.63):		
Wm. Card, exterminating rats	7 50	
Forbes Roofing Co., repairs to roof	14 50	
A. Matthews, repairs to roof	121 46	
Routery Bros., plastering	2 00	
Superintendent's Dept.. labour, $380.11; material, $251.66.	631 17	
	$2,461 70	
Less sundry credits: repairs	6 68	
	$2,455 02	
Caretakers ($700.00):		
W. J. Graham, 12 mos. to 30th June (reduced service) ..	500 00	
S. J. Apted (supervision)	200 00	
		$3,155 02

67. *Thermodynamics Building.*

Heat and light (supplied from Central Power Plant):		
Fuel for Experimental Plant ($582.47):		
Connell Anthracite Mining Co.	$582 47	
Gas and city current ($6.02):		
Consumers' Gas Co.	6 02	
Water ($92.65):		
City Treasurer	92 65	
Caretaker's supplies ($71.86):		
Superintendent's Dept., material	71 86	
Cleaning ($135.24):		
Canadian Cleaning Co., cleaning windows	17 00	
Petty items (2)	2 55	
Superintendent's Dept., labour	115 69	
Repairs and renewals ($460.65):		
Wm. Bartlett & Son, shades	8 37	
Wm. Card, exterminating rats	7 50	
Forbes Roofing Co., repairs to roof	59 34	
R. Robertson & Sons, repairs to chimney, etc.	31 78	
Superintendent's Dept., labour, $204.14; material, $149.52..	353 66	
		$1,348 89

68. *Geodetic Observatory Building.*

Heat and light (supplied from Central Power Plant):		
Caretaker's supplies ($49.28):		
Superintendent's Dept., material	$49 28	
Cleaning ($126.47):		
Canadian Cleaning Co., cleaning windows	4 00	
Superintendent's Dept., labour	122 47	
Repairs and renewals ($139.65):		
Superintendent's Dept., labor, $103.15; material, $36.50	139 65	
		$315 40

69. *Electrical Engineering.*

Supplies ($1,512.45):		
Aikenhead Hardware, hardware	$143 96	
Baines & Peckover, steel	5 91	
Wm. Bartlett & Son, shade	3 28	
Canadian General Electric Co., electrical supplies	76 06	
Canadian Westinghouse Co., oil	13 86	
Dean Bros., castings	5 25	
T. Eaton Co., cloth, shades, etc.	41 68	
Electric Specialty & Supply Co., wire, etc.	82 63	
Electric Storage Battery Co., jars	11 56	
Fletcher Mfg. Co., pans	4 71	
Jefferson Glass Co., glassware	3 37	
Leeds & Northrup Co., lamps	6 68	
Rice Lewis & Son, steel	6 56	
Geo. Lugsdin & Co., felt	2 80	
Lyman Bros. & Co., chemicals	4 19	
Macey Office Equipment Co., cards	9 65	
James Morrison Brass Mfg. Co., binding posts, washers, etc.	15 35	
R. S. Mueller & Co., clips	7 36	
Northern Electric Co., condensers	301 45	
Ontario Rubber Co., tubing	12 21	
Eugene F. Phillips Electrical Works, copper strip	114 40	
Photography, Dept. of, slides and prints	18 90	
Radio Apparatus Co., electrical supplies	29 72	
Harry V. Roome, bulbs	36 10	
Prof. T. R. Rosebrugh, disbursements: Hardware, oils, etc., $52.48; electrical supplies, etc., $22.30; car fares, $11.00; repairs and sundries, $7.06; dry goods, $4.65; cartage, $2.50	99 99	
Students' Book Dept., books	4 50	
United States Steel Products Co., steel sheets	43 07	
University of Toronto Engineering Society, book	2 75	
Victoria Paper & Twine Co., leatherette	2 48	
Ward, Leonard Electric Co., electrical supplies	71 79	
Weston Electrical Instrument Co., repairs to meters	74 15	
Wireless Specialty Apparatus Co., tube	2 45	
University Press, printing and stationery	10 85	
Petty items (3)	4 24	
Freight charges	11 86	
Superintendent's Dept., labour, $93.93; material, $132.75	226 68	
Apparatus ($1,185.28):		
James G. Biddle, rheostats	18 46	
Canadian General Electric Co., spark gap and meter	63 40	
DeForest Radio Telephone and Telegraph Co., amplifier	135 72	
T. Eaton Co., barometer and compass	18 75	
Leeds & Northrup Co., rotator	159 75	
Multi-Audi-Phone, tuners	146 73	
Robert W. Paul, telephones	9 35	
Radio Apparatus Co., apparatus	27 15	
Harry V. Roome, apparatus	41 10	
Secretary of Commerce, Washington, vacuum lamps	53 28	
Weston Electrical Instrument Co., meters and transformers.	496 66	
Freight charges	14 93	
Furniture, printing and incidentals ($111.83):		
Carswell Co., printing instruction sheets	25 00	

69. *Electrical Engineering.*—Continued.

Macey Office Equipment Co., cabinet		46 48	
University Press, cards, printing, etc.		20 75	
Superintendent's Dept., labour, $11.75; material, $7.85		19 60	
		$2,809 56	
Less sundry credits:			
Received for sale of instruction sheets	$106 50		
Damage to books by students	1 92		
		108 42	
			$2,701 14

70. *Mechanical Engineering.*

Supplies ($574 83):			
Prof. R. W. Angus, disbursements:			
Hardware, oils, etc., $13.15; slides and blue prints, $5.12; pamphlets, $2.40; sundries, $8.00		$28 67	
Art Metropole, paper		10 16	
Beardmore Belting Co., splicing belts		9 10	
Builders' Iron Foundry, piping		35 15	
T. Eaton Co., frames, etc.		15 40	
H. P. Eckardt & Co., soda		1 75	
Garlock Packing Co., packing		31 66	
Hardware Co. of Toronto, hardware		149 36	
R. G. Kirby, bookcase		29 00	
Lyman Bros. & Co., mercury		15 01	
Photography, Dept. of, slides		7 00	
Randall-Faichney Co., thermometers		18 91	
Standard Calorimeter Co., chemicals		3 90	
University of Toronto Engineering Society, supplies		8 90	
University Press, printing and stationery		18 30	
Freight charges		1 35	
Superintendent's Dept., labour, $32.87; material, $158.34		191 21	
Apparatus ($517.76):			
Boving Hydraulic & Engineering Co., tachometer		43 00	
Crosby Steam Gage & Valve Co., indicator and gages		81 85	
E. Dietzgen Co., compass		5 49	
T. Eaton Co., stop-watch		6 50	
Henry J. Green, barometer and thermometers		42 45	
W. & L. E. Gurley, meter		57 28	
Robb & Sons, tank		3 00	
Schaeffer & Budenberg, scale		3 12	
Weston Electrical Instrument Co., meters		162 39	
Freight charges		5 15	
Superintendent's Dept., labour, $66.41; material, $41.12		107 53	
Proportion of fuel for Experimental Plant ($196.02):			
Connell Anthracite Mining Co., fuel		196 02	
			$1,288 61

71. *Applied Mechanics.*

Supplies $208.01):			
Baines & Peckover, steel		$19 89	
T. Eaton Co., cards		7 25	
Hardware Co. of Toronto, hardware		110 19	
Prof. J. McGowan, petty disbursements		7 90	
Photography, Dept. of, slides		7 75	
T. G. Rice Wire Mfg. Co., riddles		2 50	
Robb & Sons, galvanized box		18 00	
York Sand & Gravel Ltd., sand		3 50	
Freight charges		2 73	
Superintendent's Dept., labour, $6.58; material, $21.72		28 30	
Apparatus ($383.95):			
John Inglis Co., repairs to testing machine		350 00	
Superintendent's Dept., labour, $9.15; material, $24.80		33 95	
			$591 96

72. *Mining Engineering.*

Supplies ($748.34):			
Aikenhead Hardware, hardware		$56.65	
Beardmore Belting Co., belting		10 00	
British Aluminium Co., aluminium		4 15	
Canadian Allis-Chalmers Ltd., crusher balls		90 00	
Contractors' Supply Co., fire clay		2 10	
Denver Fire Clay Co., fire clay		4 50	
Driver-Harris Wire Co., wire		11 40	
T. Eaton Co., supplies		54 80	
Fletcher, Russell & Co., fire clay		52 58	
Hardware Co. of Toronto, hardware		23 78	
Imperial Oil Co., oil		4 95	
J. T. King, petty disbursements		5 96	
Lyman Bros. & Co., chemicals		10 75	
Norman Macdonald, carborundum		9 45	
F. D. Mezen, glassblowing		26 25	
Ontario Lime Co., cement		2 20	
Ontario Rubber Co., tubing		12 87	
Pedlar People, Ltd., iron		13 92	
Sanderson, Pearcy & Co., paint		3 73	
T. S. Simms & Co., brushes		5 37	
Sturtevant Mill Co., discs		6 10	
Superior Mfg. Co., rubber stamps		2 55	
University Press, stationery and supplies		42 50	
Petty items (6)		7 47	
Freight charges		30 53	
Superintendent's Dept., labour, $89.66; material, $164.12		253 78	
Apparatus ($457.11):			
Baird & Tatlock (London), Ltd., cases for balances		42 44	
Baker & Co., Inc., platinum dish		4 25	
Denver Fire Clay Co., furnace		30 15	
Dodge Mfg. Co., pulley		6 30	
T. Eaton Co., microscope, etc.		19 50	
A. Matthews, apparatus parts		67 55	
G. C. Mooring, apparatus parts		9 65	
S. Robertson, apparatus parts		5 00	
Singer Sewing Machine Co., motor		18 00	
Freight charges		7 63	
Superintendent's Dept., labour, $171.95; material, $74.69		246 64	
		$1,205 45	
Less sundry credits:			
J. T. King, for material supplied	$6 00		
Refund of duty	26 40		
		32 40	
			$1,173 05

73. *Metallurgical Engineering.*

Supplies ($353.77):			
Baker & Co. Inc., platinum wire		$16 75	
Durison Castings Co., anodes		6 08	
Elmer & Amend, crucibles, glassware and supplies		107 48	
Chas. Graham Chemical Pottery Works, boxes		7 08	
International Acheson Graphite Co., electrodes		8 21	
Toronto Hydro-Electric System, current		146 25	
Petty items (2)		3 90	
Freight charges		7 75	
Superintendent's Dept., labour, $25.72; material, $24.55		50 27	
Apparatus ($432.03):			
J. W. Eberman, rectifier		30 15	
Weston Electrical Instrument Co., ammeter		27 35	
Freight charges		2 01	
Superintendent's Dept., labour, $114.23; material, $258.29		372 52	
			$785 80

74. *Ferro-Metallurgy.*

(Nothing spent.)

75. *Surveying.*

Supplies ($149.55):		
Dean Bros., castings	$30 75	
T. Eaton Co., tapes and supplies	99 42	
M. Rawlinson, cartage	1 20	
University of Toronto Engineering Society, field books and supplies	6 65	
Superintendent's Dept., labour, $7.38; material, $4.15	11 53	
Apparatus ($140.03):		
Macey Office Equipment Co., cabinet	110 00	
Superintendent's Dept., labour, $11.65; material, $18.38	30 03	
		$289 58

76. *Applied Chemistry.*

Supplies ($1,161.20):		
Prof. J. W. Bain, petty disbursements	$3 58	
Baird & Tatlock, clamps	33 84	
J. T. Baker Chemical Co., chemicals	93 07	
W. & R. Balston, filter paper	18 02	
Canadian Carbonate Co., gas	3 00	
Eimer & Amend, chemicals, glassware and supplies	456 39	
Fletcher Mfg. Co., trays, etc.	13 70	
Freyseng Cork Co., corks	4 72	
Geo. M. Hendry Co., tubing	84 63	
L'Air Liquide Society, valve	3 00	
Lake Simcoe Ice Supply Co., ice	10 80	
Rice Lewis & Son, hardware	8 33	
Lyman Bros. & Co., chemicals	44 23	
Nichols Chemical Co., chemicals	88 49	
Ontario Rubber Co., tubing	24 84	
Photography, Dept. of, prints	3 15	
C. Stewart, repairs	5 00	
Arthur H. Thomas Co., crucibles	62 72	
Whitall-Tatum Co., jars	18 90	
University Press, cards and labels	12 20	
Petty items (3)	5 25	
Freight charges	39 85	
Superintendent's Dept., labour, $50.31; material, $73.18	123 49	
Apparatus ($175.97):		
American Meter Co., meter	66 33	
Fletcher Mfg. Co., tanks and stands	37 75	
Superintendent's Dept., labour, $56.66; material, $15.23	71 89	
	$1,337 17	
Less sundry credits:		
Leavitt, Jackson Engineering Co., cheque issued in 1914-15, returned	9 40	
		$1,327 77

77. *Electro-Chemistry.*

Supplies ($528.87):		
J. T. Baker Chemical Co., chemicals	$127 27	
J. T. Burt-Gerrans, disbursements:		
Hardware, oils, etc., $40.51; laboratory and office supplies, $31.79; car fares, $2.00; sundries, $2.85	77 15	
Canada Metal Co., solder	40 28	
Central Electric Supply Co., binding posts	6 00	
Goldsmith Bros., silver	39 36	
Lake Simcoe Ice Supply Co., ice	9 64	
Lyman Bros. & Co., chemicals	14 60	
Northern Electric Co., electrical supplies	148 68	

77. *Electro-Chemistry.*—Continued.

Ontario Rubber Co., stoppers and tubing	11 21	
T. G. Rice Wire Mfg. Co., wire cloth	23 10	
W. W. Wells, brushes	7 99	
Freight charges	9 09	
Superintendent's Dept., labour, $10.50; material, $4.00	14 50	
Apparatus ($620.62):		
Bausch & Lomb Optical Co., apparatus	141 64	
James G. Biddle, rheostats	36 15	
Death & Watson, plates	23 00	
Eimer & Amend, rheostats	43 51	
Fletcher Mfg. Co., apparatus	19 55	
Geo. Leworthy, apparatus	30 00	
Lyman's Ltd., silica tubes	22 09	
Malcolm & Co., commutator	65 00	
W. R. McKee, resistance boards	4 50	
Randall-Faichney Co., thermometers and apparatus	21 83	
S. S. Stolp, battery	12 10	
Ward-Leonard Electric Co., controller	11 97	
Weston Electrical Instrument Co., voltmeter	8 72	
A. H. Winter-Joyner, meters	44 57	
Freight charges	5 80	
Superintendent's Dept., labour, $107.59; material, $22.60	130 19	
		$1,149 49

78. *Architecture and Drawing.*

Architecture:		
Supplies ($165.89):		
Anatomical Dept., methylated spirits	$2 50	
Balmer & Blakeley, canvas	4 40	
City Towel, Apron Supply & Laundry Co., towel supply	12 00	
E. Harris Co., colours	15 42	
James Morrison Brass Mfg. Co., piping	5 88	
Ontario Lime Co., plaster paris	7 00	
Photography, Dept. of, prints and slides	20 10	
Students' Book Dept., books, $29.30; supplies, $26.25	55 55	
United Typewriter Co., inspection	4 50	
University Press, stationery and supplies	22 42	
Petty items (4)	3 56	
Superintendent's Dept., labour, $1.43; material, $11.13	12 56	
Apparatus ($92.17):		
J. L. Banks, models	22 25	
Hardware Co. of Toronto, tools	7 35	
National Electric Heating Co., heaters	9 00	
Office Specialty Mfg. Co., cabinet	6 75	
Photography, Dept. of, slide boxes	7 80	
University of Toronto Engineering Society drawing instruments	18 00	
University Press, slide rule	5 10	
Superintendent's Dept., labour, $5.95; material, $9.97	15 92	
Assistance and models for life class ($142.25):		
F. E. Simpson, assistance	100 00	
Prof. C. H. C. Wright, paid for services of models	42 25	
	$400 31	
Drawing:		
Supplies ($101.00):		
City Towel, Apron Supply & Laundry Co., towel supply	7 50	
T. Eaton Co., flags	15 20	
Hardware Co. of Toronto, saws and rope	15 09	
Photography, Dept. of, prints	3 30	
Students' Book Dept., note books	3 30	
University Press, stationery and supplies	47 31	
Petty items (2)	1 05	
Superintendent's Dept., labour, $5.86; material, $2.39	8 25	

78. *Architecture and Drawing.*—Continued.

Apparatus ($46.57):		
Office Specialty Mfg. Co., chair	6 25	
Superintendent's Dept., labour, $23.29; material, $17.03	40 32	
Printing instruction sheets ($21.80):		
University Press, printing	21 80	
		$569 68

79. *Engineering Physics and Photography.*

Engineering Physics:		
Supplies ($203.15):		
Aikenhead Hardware, hardware	$9 23	
American Tent & Awning Co., case	3 00	
Prof. G. R. Anderson, petty disbursements	7 42	
Canadian General Electric Co., electrical supplies	61 20	
Canadian Storage Battery Co., batteries	15 20	
Consolidated Optical Co., repairs	2 00	
E. Dietzgen Co., cloth	8 00	
T. Eaton Co., thermos bottles	3 00	
Geo. M. Hendry Co., supplies	31 80	
Lake Simcoe Ice Supply Co., ice	6 66	
Lyman Bros. & Co., chemicals	14 41	
Ontario Rubber Co., tubing	9 06	
Ryrie Bros., repairs	4 00	
Students Book Dept., books and maps	6 90	
Superintendent's Dept., labour, $5.10; material, $16.17.	21 27	
Apparatus ($345.13):		
Canadian General Electric Co., motors	42 28	
J. J. Griffin & Sons, apparatus	192 64	
Charles Potter, barometer	13 00	
Ryrie Bros., stop watch	8 50	
Topley Co., balopticons	87 70	
Freight charges	1 01	
	$548 28	
Photography:		
Supplies ($716.45):		
Ansco Co., supplies	$67 25	
Art Metropole, colors and supplies	8 53	
Canadian Kodak Co., films	43 04	
City Towel, Apron Supply & Laundry Co., towel supply	6 61	
E. Dietzgen Co., blue print paper	16 09	
T. Eaton Co., supplies	16 20	
Lyman Bros. & Co., chemicals	30 10	
Charles Potter, cases	4 60	
J. G. Ramsey & Co., chemicals and supplies	12 36	
M. Rawlinson, cartage	2 65	
Topley Co., lamps, etc.	23 00	
United Photographic Stores, films, plates and chemicals	439 61	
University Press, binding and stationery	29 92	
Petty items (2)	2 54	
Superintendent's Dept., labour, $8.16; material, $5.79..	13 95	
Apparatus ($414.17):		
E. Dietzgen Co., stand	10 78	
T. Eaton Co., meter	15 00	
Topley Co., balopticon and dissolver	44 70	
United Photographic Stores, camera, etc.	343 69	
Messengers ($119.51):		
Andrew Stevens, 18 weeks, 1½ days at $4.00 per week	72 85	
E. W. Evans, 11 weeks, 4 days at $4.00 per week	46 66	
	$1,798 41	
Less received for work done for various departments (including accounts receivable, $37.78)	381 63	
		$1,416 78

80. *General Expenses.*

Stationery, printing and office supplies ($691.76):		
The Bursar, postage supplied	$150 00	
Prof. A. T. Laing, petty disbursements	4 86	
Might Directories, city directory	10 00	
Remington Typewriter Co., inspection	13 50	
United Typewriter Co., inspection	6 75	
University Press, calendar, printing and stationery	495 65	
Petty items (2)	1 90	
Superintendent's Dept., labor, $4.74; material, $4.36	9 10	
Furnishing Dean's Room ($106.00):		
T. Eaton Co., furnishings	106 00	
		$797 76
		$135,567 31

V. Faculty of Household Science.

81. *Salaries.*

Household Science Department ($7,800):		
Miss A. L. Laird, Associate Professor, 12 mos. to 30th June	$2,500 00	
Lecturers (Sessional):		
Miss L. L. Ockley (Special Course)	1,500 00	
Miss W. Cruise	1,200 00	
Instructors (Sessional):		
Miss M. Auten (half time to new Course)	1,000 00	
Miss M. V. Manning (half time to new Course)	1,000 00	
Miss M. J. Holmes, Laboratory Assistant (Sessional)	600 00	
Food Chemistry Department ($3,100):		
Miss C. C. Benson, Associate Professor of Physiological Chemistry (also Secretary to Faculty), 12 mos. to 30th June	2,500 00	
Miss S. M. Hamilton, Instructor (Sessional—part time to new Course)	600 00	
		$10,900 00

82. *Household Science Building and Department.*

(a) Maintenance of Building:		
Heat and light (supplied from Central Power Plant):		
Gas, city current and occasional fuel ($175.07):		
Consumers' Gas Co.	$175 07	
Water ($86.54):		
City Treasurer	86 54	
Caretaker's supplies ($96.07):		
Superintendent's Dept., material	96 07	
Cleaning ($1,063.09):		
Canadian Cleaning Co., cleaning windows	25 00	
Superintendent's Dept., labor	1,038 09	
Repairs and renewals ($321.26):		
Wm. Card, exterminating rats	7 50	
City Treasurer, elevator license	5 00	
Johnson Temperature Regulating Co., repairs	13 25	
Murray-Kay Ltd., hangings	9 50	
R. Robertson & Sons, masonry	16 48	
Routery Bros., plastering	13 25	
Superintendent's Dept., labor, $119.53; material, $136.75	256 28	
	$1,742 03	
Less sundry credits: cleaning, $5.25; repairs, $1.00	6 25	
	$1,735 78	
Caretaker, F. Hanmer, 12 mos. to 30th June (with rooms, heat and light)	885 00	
		$2,620 78

82. *Household Science Building and Department.*—Continued.

(*b*) Maintenance of Departments:		
(1) Household Science:		
Laboratory supplies, including food materials, fuel for cooking, etc. ($817.03):		
R. Barron, groceries		$50 28
City Dairy Co., milk		60 00
Wm. Davies Co., provisions		54 75
Eimer & Amend, thermometers		72 57
Harris Abattoir Co., meat and provisions		88 23
Geo. M. Hendry Co., glassware and supplies		55 36
Miss A. L. Laird, disbursements:		
Laboratory supplies, $8.71; food supplies, $2.10; sundries, $1.71		12 52
Lyman Bros. & Co., chemicals		11 33
A Provan, groceries		409 90
Petty items (2)		2 09
Laboratory attendance ($680.00):		
Mrs Bowes, 200 days at $1.40		280 00
Mrs. Burrow, 5 months at $28.00	$140 00	
1 month at $25.00	25 00	
1 month at $24.00	24 00	
1 month at $22.00	22 00	
		211 00
Mrs. Dawson, 3 months at $28.00	$84 00	
½ month at $22.00	11 00	
		95 00
Mrs. Hingeley, 2½ months at $28.00	$70 00	
1 month at $24.00	24 00	
		94 00
Equipment and incidentals ($147.40):		
J. S. Chapman & Co., covers		7 80
T. Eaton Co., range		5 00
Geo. M. Hendry Co., equipment		50 87
Hughes Electric Heating Co., range		66 63
Toronto Hydro-Electric System, iron		3 00
United Typewriter Co., inspection		2 25
University Press, examination paper		10 35
Superintendent's Dept., material		1 50
Use of city schools ($450.00);		
Board of Education, City of Toronto		450 00
Books ($50.00):		
Students' Book Dept., books		50 00
(2) Food Chemistry:		
Maintenance ($307.11):		
Arlington Chemical Co., chemicals		4 05
Dr. C. C. Benson, disbursements:		
Laboratory and office supplies, $29.65; food supplies, $12.58		42 23
T. Eaton Co., stove and towelling		10 37
Freyseng Cork Co., corks		9 85
J. F. Hartz Co., chemicals		2 50
Geo. M. Hendry Co., glassware and supplies		175 89
Lyman Bros. & Co., chemicals		21 31
Ontario Rubber Co., tubing		17 38
Students' Book Dept., books		24 85
Arthur H. Thomas Co., chemicals and glassware		50 35
S. S. White Dental Mfg. Co., vulcanizer, etc.		45 55
University Press, paper		2 80
		$407 13
Less received from students for breakages, $74.52; sale of pamphlets, $25.50		100 02
		$307 11

82. *Household Science Building and Department.*—Continued.

Laboratory attendance ($259.92):		
At 17½ cents per hour:		
Katie Bain	148 55	
Hazel Wrightman	107 00	
Jessie Bain	4 37	
(3) General expenses:		
Stationery, printing, office supplies and incidentals ($90.01):		
The Bursar, postage supplied	31 00	
University Press, printing and stationery	56 51	
Superintendent's Dept., material	2 50	
Clerical assistance ($300.00):		
Miss Marion Mitchell, 17 weeks at $10.00	170 00	
Miss Norma Emery, 13 weeks	130 00	
		$3,101 47
		$16,622 25

VI. Faculty of Education.

83. *Salaries.*

W. Pakenham, Professor of History and Science of Education (also Dean of Faculty), 12 months to 30th June	$3,800 00
Associate Professors, each 12 months to 30th June:	
H. J. Crawford, also Headmaster of University Schools	3,200 00
P. Sandiford	3,000 00
Lecturers in Methods; also Chief Instructors, University Schools, each 12 months to 30th June:	
G. A. Cornish, Science	2,500 00
J. T. Crawford, Mathematics	2,500 00
O. J. Stevenson, English and History, 1st July to 31st August, at $2,300 (resigned)	383 32
G. M. Jones, English (10 payments)	2,500 00
W. C. Ferguson, French and German	2,400 00
F. E. Coombs, Elementary Subjects	2,400 00
S. W. Perry, Art and Commercial Work	2,200 00
Assistant Instructors in University Schools:	
T. M. Porter, 12 months to 30th June	2,200 00
H. A. Grainger, 12 months to 30th June	2,200 00
J. A. Irwin, 12 months to 30th June	2,100 00
J. O. Carlisle, 12 months to 30th June	2,000 00
J. G. Workman, 12 months to 30th June	2,000 00
W. J. Dunlop, 12 months to 30th June	1,900 00
A. N. Scarrow, also Instructor in Faculty of Education, 12 months to 30th June	1,900 00
H. G. Manning, at $1,800 (war service, half pay)	900 00
A. R. M. Lower, substitute for Manning, salary for 10 teaching months	1,600 00
G. A. Cline, at $1,800 (war service, half pay)	900 00
C. L. Brown, substitute for Cline, salary for 10 teaching months	1,800 00
W. L. C. Richardson, 12 months to 30th June	1,800 00
G. N. Bramfitt, also Instructor in Faculty of Education, at $1,800, 1st July to 30th September, $450; war service, half pay from 1st October, $675	1,125 00
D. J. Gray, substitute for Bramfitt, salary for 9 teaching months	1,350 00
N. L. Murch, 12 months' salary (10 payments)	1,700 00
D. E. Hamilton, 12 months to 30th June	1,600 00
E. L. Daniher, 12 months' salary (10 payments)	1,500 00
Miss L. L. Ockley, Instructor in Household Science (Sessional —paid also in Faculty of Household Science)	100 00
Supervisors of Practice-teaching (Sessional):	
J. Jeffries, High Schools	100 00
W. E. Groves, Public Schools	100 00
Miss L. Swinarton, Stenographer in Dean's Office, 12 months to 30th June	675 00
	$54,433 32

84. *Education Building and Department.*

(*a*) Maintenance of Building:		
Fuel ($1,122.84):		
W. H. Cox Coal Co.	$837 12	
I. H. Crosby	185 60	
Britnell & Co., cartage	100 12	
Light ($433.34):		
Toronto Electric Light Co.	377 27	
Consumers' Gas Co.	56 07	
Water ($142.52):		
City Treasurer	142 52	
Caretaker's supplies ($311.82):		
Superintendent's Dept., material	311 82	
Cleaning ($1,215.20):		
Canadian Cleaning Co., cleaning windows	18 00	
Superintendent's Dept., labor	1,197,20	
Repairs and renewals ($860.42):		
Forbes Roofing Co., repairs to roof	4 37	
A. Matthews, repairs to roof	25 40	
R. Robertson & Son, rebuilding smoke consumers	42 30	
Routery Bros., plastering	15 75	
Superintendent's Dept., labor, $413.54; material, $359.06	772 60	
	$4,086 14	
Less sundry credits: cleaning, $43.52; repairs, $4.75	48 27	
	$4,037 87	
Engineer and Caretaker, S. Hunter, 12 months to 30th June	1,200 00	
Firemen, at $50.00 per month:		
R. Bullock, 4½ months	225 00	
J. Banford, 3½ months	175 00	
A. Bennett, 29 days	48 32	
Messengers:		
S. Green, 29 weeks, 4 days at $4.00 per week	118 67	
A. Scott, 21 weeks, 4 days at $4.75 per week (paid also as laboratory attendant under Department)	103 71	
		$5,908 57
(*b*) Maintenance of Department:		
Payment to City Board of Education for use of schools, 22 rooms at $150 a room	$3,300 00	
Clerical and laboratory assistance ($645.75):		
Miss G. Cotter, 10½ weeks at $10.00 per week, $105.00; 42 weeks at $10.50 per week, $441.00	546 00	
A. Scott, 21 weeks, 5 days at $2.50 per week	54 75	
S. Green, 30 weeks at $1.50 per week	45 00	
Office supplies ($784.39):		
Adams Furniture Co., tables	18 00	
The Bursar, postage supplied	180 00	
T. Eaton Co., tables	21 50	
Office Specialty Mfg. Co., cards and folders	13 53	
Prof. Wm. Pakenham, disbursements:		
Office supplies and sundries, $10.40; car fares, $7.50	17 90	
The School, bound copies	10 00	
Toronto Stamp & Stencil Works, die	3 50	
United Typewriter Co., inspection	18 00	
University Press, calendar, printing and stationery	498 91	
Superintendent's Dept., labor, 55c.; material, $2.50	3 05	
General supplies and apparatus for class-room use, including lockers and furniture ($1,698.01):		
Bausch & Lomb Optical Co., carbons	7 12	
Miss L. E. Bowers, illuminating honor roll	50 00	
Cutler Ink Co., ink	8 40	
E. Dietzgen Co., paper, etc.	16 69	
T. Eaton Co., supplies	64 39	
E. B. Eddy Co., matches	5 25	

85. *Education Building and Department.*—Continued.

Glasgow, Brook & Co., books	9 00	
Gourlay, Winter & Leeming, piano hire	30 00	
Geo. M. Hendry Co., apparatus and supplies	421 83	
N. S. Houghton, chairs	82 50	
R. Laidlaw & Co., lumber	63 50	
Lyman Bros. & Co., chemicals	34 41	
Mackenzie & Co., framing pictures	131 45	
Geo. B. Meadows Co., lockers, etc.	223 90	
Pathéscope Co., lamps	6 00	
T. S. Plaskett, repairs	2 70	
E. H. Sargent & Co., cartridges	3 23	
E. Scholey, wireless apparatus	12 00	
John A. Stokes, slides	19 50	
Students' Book Dept., books, maps, etc.	62 01	
R. M. Williams, filling in diplomas	3 25	
University Press, examination books, printing and supplies	159 40	
Sundry newspapers, advertising re-opening of schools, etc.	21 32	
Petty items (7)	11 87	
Superintendent's Dept., labor, $133.21; material, $115.08	248 29	
Athletics ($603.05):		
Aura Lee Club, use of athletic grounds	300 00	
Dominion Regalia Co., banners	16 00	
Ryrie Bros., medals and pins	111 40	
A. G. Spalding & Bros., balls	5 00	
Superintendent's Dept., labor, $162.91; material, $7.74	170 65	
Equipping Lunch Room ($681.39):		
Adams Furniture Co., stools	40 00	
T. Eaton Co., utensils	114 67	
Miss F. C. Elliott, utensils	11 92	
Gurney Foundry Co., ranges	32 66	
Rice Lewis & Son, refrigerator	67 50	
Geo. Sparrow & Co., utensils	17 05	
Superintendent's Dept., labor, $228.85; material, $168.74	397 59	
		$7,712 59
		$68,054 48

VII. Faculty of Forestry.

85. *Salaries.*

B. E. Fernow, Professor (also Dean of Faculty), 12 months to 30th June	$4,000 00	
Assistant Professors, each 12 months to 30th June:		
W. N. Millar	2,100 00	
C. D. Howe, at $2,300, of which $1,150 charged to Botany	1,150 00	
J. H. White, Lecturer (Sessional) at $2,000, of which $500 charged to Botany	1,500 00	
Miss E. W. Mills, Stenographer in Dean's Office, 12 months to 30th June	600 00	
		$9,350 00

86. *Forestry Building and Department.*

(*a*) Maintenance of Building:		
Fuel ($474.79):		
Connell Anthracite Mining Co.	$474 79	
Light ($162.59):		
Toronto Electric Light Co.	138 72	
Consumers' Gas Co.	23 87	
Water ($23.31):		
City Treasurer	23 31	

86. *Forestry Building and Department.*—Continued.

Caretaker's supplies ($51.93):		
Superintendent's Dept., material	51 93	
Cleaning ($205.91):		
Allen Mfg. Co., laundry	1 29	
Canadian Cleaning Co., cleaning windows	6 00	
Ontario Laundry Co., laundry	0 87	
Superintendent's Dept., labor	197 75	
Repairs and renewals ($165.12):		
A. Matthews, repairs to roof	12 30	
Superintendent's Dept., labor, $113.56; material, $39.26	152 82	
	$1,083 65	
Less sundry credits: light, $2.50; cleaning, $1.00 ..	3 50	
	$1,080 15	
Caretaker, H. Lonergan, 12 months to 30th June	600 00	
		$1,680 15
(*b*) Maintenance of Department:		
Laboratory supplies and apparatus ($174.88):		
Prof. B. E. Fernow, petty disbursements	$8 70	
Photography, Dept. of, prints	7 40	
Photography, Ltd., prints	8 23	
E. S. Shipp, prints	6 90	
Superintendent of Documents, Washington, bulletins ..	6 56	
Topley Co., balopticon and specimen jars	130 36	
Petty items (2)	1 83	
Superintendent's Dept., labor, $2.85; material, $2.05 ..	4 90	
Office expenses, printing and postage ($99.23):		
The Bursar, postage supplied	50 00	
Lowe-Martin Co., transfer cases	7 00	
United Typewriter Co., inspection and supplies	13 73	
University Press, stationery and supplies	21 85	
Petty items (4)	5 57	
Superintendent's Dept., material	1 08	
Fittings and contingencies ($51.07):		
T. Eaton Co., tables	6 50	
Prof. B. E. Fernow, petty disbursements	3 84	
M. Rawlinson, cartage	3 41	
Students' Book Dept., book	2 55	
Petty items (5)	6 11	
Freight charges	13 65	
Superintendent's Dept., labor, $12.66; material, $2.35 .	15 01	
Practice camp, etc., ($82.99):		
Superintendent's Dept., labor, $37.92; material, $45.07; making boxes for transportation	82 99	
		$408 17
		$11,438 32

VIII. University Extension and Social Service.

87. *University Extension.*

(*a*) Correspondence Courses between Summer Sessions ($899.50):		
Remuneration to Instructors:		
G. A. Cornish	$226 50	
J. T. Crawford	45 00	
J. O. Carlisle	200 50	
D. E. Hamilton	24 00	
H. A. Grainger	140 00	
A. R. M. Lower	36 00	
G. M. Jones	50 00	
J. G. Workman	67 50	
W. C. Ferguson	24 00	
Wm. Ward	36 00	

87. *University Extension.*—Continued.

Editing bulletins:

J. G. Workman	25 00	
J. O. Carlisle	25 00	

(*b*) Teachers' Courses: (nothing spent).

(*c*) Local Lectures ($305.00):

	Total. Payment.	Paid by Local Centres. Fees.	Expenses.
A. H. Abbott	$5 00		
G. S. Brett	78 00	$30 00	$18 00
St. Elme de Champ	284 20	10 00	164 20
C. A. Chant	8 40		3 40
A. P. Coleman	18 75		3 75
F. E. Coombs	20 00	5 00	5 00
R. Davidson	5 00		
J. G. Hume	5 00		
M. Hutton	27 85	5 00	12 85
G. E. Jackson	26 00	10 00	6 00
D. R. Keys	38 50	10 00	13 50
D. Marino	5 00	5 00	
J. Mavor	38 25		23 25
R. M. MacIver	5 00		
W. A. Parks	39 00	15 00	9 00
P. Sandiford	20 00	6 40	3 60
J. Squair	5 00	5 00	
C. W. Stanley	44 00	10 00	14 00
F. N. Turner	10 35	5 00	5 35
E. M. Walker	13 00	5 00	3 00
M. W. Wallace	50 00	50 00	
J. S. Will	19 00		9 00
G. M. Wrong	8 50		3 50
	$773 80	$171 40	$297 40
Paid by Local Centres	468 80		
Paid by University			305 00

(*d*) Office expenses ($2,584.69):

A. H. Abbott, services as secretary	300 00	
Miss H. M. Latter, assistant secretary, 12 months to 30th June	800 00	
Clerical assistance ($741.50):		
Miss C. McCallum, 40 weeks, 2 days at $11.50 per week, $463.50; 8 weeks at $17.00, $136.00	599 50	
Miss A. M. Goddard, 4 weeks at $18.00 per week, $72.00; 16 days at $2.50 per day, $40.00	112 00	
Miss L. M. Phillips, 2 weeks at $15.00	30 00	
Stationery, printing, office supplies and incidentals ($743.19):		
The Bursar, postage supplied	$314 80	
Harry Edwards, mailing circulars	9 92	
Lowe-Martin Co., cards	2 20	
Chas. W. Mack, rubber stamps	3 60	
Office Specialty Mfg. Co., cabinet and cards	18 00	
Photography, Dept. of, prints	60	
Toronto Weekly Railway and Steamboat Guide, subscription to "Guide"	3 00	
United Typewriter Co., inspection and supplies	15 50	
University Press, printing, stationery and supplies	371 82	
Petty items (3)	3 75	
		$3,789 19

88. *Social Service Courses.*

(*a*) Maintenance of Building (8 Queen's Park):

Fuel ($199.16):		
Connell Anthracite Mining Co.	$199 16	
Light ($13.65):		
Consumers' Gas Co.	13 65	

88. *Social Service Courses.*—Continued.

Water ($16.68):		
City Treasurer	16 68	
Caretaker's supplies ($41.09):		
Superintendent's Dept., material	41 09	
Cleaning ($339.70):		
Superintendent's Dept., labor	339 70	
Sundries ($155.32):		
Forbes Roofing Co., repairs to roof	9 49	
A. Matthews, repairs to roof	26 83	
Patterson & Heward, sign	18 50	
Robert Simpson Co., mirror	2 75	
Superintendent's Dept., labor, $48.15; material, $49.60	97 75	
	$765 60	
Less sundry credits: cleaning	1 00	
	$764 60	
Alterations and repairs to put building in order ($1,279.40):		
City Treasurer, putting in water service	30 87	
Elliott & Brown, plastering, $85.00; cistern, $17.00	102 00	
Superintendent's Dept., labor, $692.43; material, $454.10	1,146 53	
		$2,044 00
(*b*) Maintenance of Department:		
Franklin Johnson, Jr., remuneration as Director, $3,000.00 (paid from special donation):		
Honoraria to lecturers ($675.00):		
A. H. Burnett	$150 00	
Miss S. L. Carson	200 00	
Miss Jane Grant	150 00	
Miss H. L. Hart	150 00	
C. M. Hincks	25 00	
Clerical assistance and secretariat ($523.00):		
Miss Mary McDonnell, 156 days at $2.00 per day	312 00	
Miss A. C. McGregor, 61½ days at $2.00, $123.00; 32 days at $1.25, $40.00	163 00	
Miss Mabel Snell, 17 days at $2.00 per day	34 00	
Miss Ethel Burnett, 5 days at $2.00 per day	10 00	
Miss L. M. Greer, 2 days at $2.00 per day	4 00	
Office furniture and supplies ($271.51):		
The Bursar, postage supplied	99 00	
James & Sons, photographs	6 50	
Dr. Franklin Johnson, Jr., petty disbursements	4 97	
Geo. Leworthy, operating lantern	3 00	
Macey Office Equipment Co., cabinet, chair and supplies	24 43	
Toronto Stamp & Stencil Works, stamps	8 00	
University Press, printing and stationery	114 20	
Petty items (7)	6 41	
Superintendent's Dept., labor, $2.58; material, $2.42	5 00	
Books ($149.68):		
Students' Book Dept.	142 60	
Survey Committee, Cleveland Foundation	7 08	
Equipment for new building ($800.44):		
Wm. Bartlett & Son, shades	42 35	
Canada Furniture Manufacturers, chairs	150 00	
T. Eaton Co., tables	12 00	
Library Bureau of Canada, table	10 00	
Macey Office Equipment Co., cabinet	6 30	
Petty items (2)	2 94	
Superintendent's Dept., labor, $172.24; material, $404.61	576 85	
		$2,419 63
		$8,252 82

IX. Residences and Dining Hall.

89. *Men's Residences.*

Heat and light (supplied from Central Power Plant, except for 85 St. George Street):		
Gas, city current and occasional fuel ($266.19):		
Connell Anthracite Mining Co.	$264 58	
Consumers' Gas Co.	1 61	
Water ($153.63):		
City Treasurer	153 63	
Caretaker's supplies ($350.64):		
Superintendent's Dept., material	350 64	
Cleaning and House Service ($3,847.81):		
Allen Mfg. Co., laundry	96 61	
Ontario Laundry Co., laundry	77 42	
Puritan Laundry Co., laundry	69 00	
Superintendent's Dept., labor	3,575 23	
University Dining Hall, 197 meals supplied to cleaners in Residences as part of remuneration	29 55	
Repairs and renewals ($1,619.80):		
Wm. Bartlett & Son, shades	60 65	
Wm. Card, exterminating rats	7 50	
A. Matthews, repairs to roof	182 00	
University Press, printing	3 25	
Petty items (2)	3 10	
Superintendent's Dept., labor, $665.61; material, $697.69	1,363 30	
	$6,238 07	
Less sundry credits: repairs	123 50	
		$6,114 57

90. *Women's Residences.*

Fuel ($1,466.85):		
Connell Anthracite Mining Co.	$1,466 85	
Light ($457.75):		
Toronto Electric Light Co	282 96	
Consumers' Gas Co.	174 79	
Water ($149.50):		
City Treasurer	149 50	
Repairs and renewals ($1,199.47):		
Wm. Bartlett & Son, shades	27 07	
Forbes Roofing Co., repairs to roof	24 16	
A. Matthews, repairs to roof	9 10	
Routery Bros., plastering	76 35	
Superintendent's Dept., labor, $540.44; material, $522.35	1,062 79	
	$3,273 57	
Housekeeping Account:		
Provisions and housekeeping expenses ($6,251.49):		
Armstrong & Paffard, groceries	$253 38	
Canada Bread Co., bread	336 74	
Canada Stamp & Stencil Works, rubber stamp	3 25	
City Dairy Co., ice cream	31 35	
Cleghorn & Co., vegetables	38 25	
Club Coffee Co., coffee	7 65	
Geo. Coles, pastry	32 51	
Wm. Dawson & Son, periodicals	4 90	
T. Eaton Co., utensils, etc.	83 11	
Farmers' Dairy Co., milk	638 26	
Gallagher & Co., fruit	19 71	
Globe Printing Co., subscription	3 00	
Gourlay, Winter & Leeming, piano hire	108 00	
Gowans, Kent & Co., plate	7 40	
Gurney Foundry Co., utensils	113 85	
Hardware Co., of Toronto, cans	9 00	

90. *Women's Residences.*—Continued.

A. H. Harradin, upholstering		5 00
Harris Abattoir Co., meat and provisions		2,377 91
R. B. Hayhoe & Co., groceries		2 80
H. J. Heinz Co., pickles		44 05
R. Higgins & Son, groceries		2 78
Wm. Jay & Son, ferns		6 90
Lake Simcoe Ice Supply Co., ice		89 00
Geo. Lister, fruit and vegetables		243 35
Miss L. Livingstone, disbursements: utensils, house furnishings, stationery, etc., $70.04; postage and car fares, $36.50; food supplies, $31.27; sewing, etc., $10.91; flowers and ferns, $10.29; cartage and express, $9.36; drugs, $5.23; sundries, $12.91		186 51
Maple Leaf Milling Co., flour		56 90
T. E. McCollum, fruit		3 70
Medland Bros., groceries		667 33
A. A. Moses, hardware		18 50
Murray-Kay Ltd., aprons and caps		30 50
E. H. Roberts, finishing floors		5 50
E. J. Ryan, vegetables		108 70
Wm. Ryan, provisions		51 92
Simmers Seed Co., flowers		6 00
F. Simpson & Sons, fish and fruit		260 77
Geo. Sparrow & Co., repairs		12 50
Tassie Co., eggs		14 40
Andrew Thompson, provisions		25 46
Todhunter, Mitchell & Co., coffee		51 25
G. A. Town, repairs		4 00
Mrs. G. A. Town, sundry meals supplied		48 00
L. A. Wade, fruit		42 83
White & Co., fruit		69 68
Whyte Packing Co., provisions		103 49
University Press, printing and stationery		15 30
Petty items (4)		6 10
Cleaning and House Service ($3,877.90):		
Allen Mfg. Co., laundry		493 41
Canadian Cleaning Co., cleaning windows		21 50
Ontario Laundry Co., laundry		28 75
Albert Whale, cleaning carpets		7 54
Superintendent's Dept., cleaning material		171 99
Pay lists, wages of servants, maids, etc.		3,143 17
Evening Telegram, advertising for maids		5 54
New Method Employment Agency, securing maids		6 00
Special furnishings ($499.79):		
W. R. Brock Co., carpets		59 37
T. Eaton Co., curtains, bedding, and furniture		410 67
L. Rawlinson, tables and tray		26 50
Albert Whale, upholstering		3 25
	$10,629 18	
Less sundry credits; laundry and occasional meals, etc.	173 18	
	$10,456 00	
Superintendent, Miss L. I. Livingstone, 12 months to 30th June	1,000 00	
Housekeeper:		
Miss M. J. Cartwright, 2½ months to 15th September at $800.00 per annum, $166.66, honorarium upon leaving, $66.66	233 32	
Miss A. M. Prangley, 9½ months to 30th June	633 33	
		$15,596 22

91. *Dining Hall.*

Fuel ($219.61):	
Connell Anthracite Mining Co.	$69 61
Elias Rogers Co.	150 00
Light ($184.45):	
Consumers' Gas Co.	184 45
Cleaning and House Service ($7,048.83):	
Allen Mfg. Co., laundry	506 27
Pay lists, wages of waiters and other servants	6,542 56
Food supplies ($21,267.14):	
Armstrong & Paffard, groceries	1,095 45
G. A. Avery, honey	11 37
Belle Ewart Ice Co., ice	147 12
W. L. Bengough, fruit	23 70
Calumet Tea & Coffee Co., meal	14 82
Campbell Flour Mills Co., flour	165 45
Canada Bread Co., bread	1,852 89
C. P. Carpenter & Son, fruit	6 24
Cleghorn & Co., vegetables	108 75
Clubb Coffee Co., coffee	7 25
Geo. Coles, pastry	6 10
Co-Operative Fruit Growers of Ontario, fruit	30 35
Canadian Officers' Training Corps, food supplies	25 20
James Dempster, buns	4 00
H. P. Eckardt & Co., groceries	468 04
Farmers' Dairy Co., milk	2,646 48
Harris Abattoir Co., meat and provisions	9,653 76
R. B. Hayhoe & Co., groceries	21 94
H. J. Heinz Co., pickles	36 05
Hill & Parkinson, groceries	17 63
Imperial Extract Co., extract	6 60
Geo. Lister, vegetables and fruit	679 22
Maple Leaf Milling Co., flour	48 00
Marshalls, Ltd., honey	11 53
T. E. McCollum, fruit	20 02
J. J. McLaughlin, oranges	7 00
Medland Bros., groceries	1,329 77
F. Morland, coffee	25 00
A. Provan, flour	3 75
Geo. Puddy, provisions	25 79
E. J. Ryan, vegetables and fruit	777 70
Wm. Ryan, provisions	287 15
Ryley & Sons, eggs	397 50
Miss V. M. Ryley, sundry disbursements	10 91
F. Simpson & Sons, fish	263 15
Todhunter, Mitchell & Co., coffee	189 99
Chas. Topping, vegetables	25 10
Vanluven Bros., maple syrup	21 00
L. A. Wade, fruit	3 40
Warren Bros. & Co., groceries	153 46
Wentworth Orchard Co., jam	5 50
Geo. Weston, biscuits	3 27
White & Co., fruit and fish	643 57
Whyte Packing Co., provisions	30 66
Petty items (3)	5 71
	$21,317 34
Less received for sale of garbage	50 20
	$21,267 14
Dishes, utensils and sundry expenses ($955.72):	
Brantford Computing Scale Co., meat slicer	144 00
Canadian Wm. A. Rogers, spoons	23 00
John Catto & Son, towelling	10 00
Common Sense Mfg. Co., rat poison	3 00
Diamond Cleanser, cleaning material	10 50
T. Eaton Co., furnishings and utensils	18 45
Evening Telegram, advertising *re* attendants	17 34

91. *Dining Hall.*—Continued.

Gas Control Co., rent of governor	4 50	
Gowans, Kent & Co., crockery	16 71	
Gurney Foundry Co., utensils and repairs	28 79	
Geo. M. Hendry Co., thermometers	4 28	
Interlake Tissue Mills, paper napkins	30 00	
Macey Office Equipment Co., stationery and supplies	5 15	
C. W. Mack, rubber stamp	2 89	
W. H. Martin & Co., glassware	40 75	
Miller & Sons, flowers	17 45	
New Method Help Supply, securing attendants	5 00	
Northern Aluminum Co., saucepan	7 90	
Ratcliff Paper Co., paper	2 80	
T. H. Robinson, repairs to clock	2 00	
Miss V. M. Ryley, disbursements: Express, $28.81; office supplies and sundries, $21.36; utensils, etc., $13.03; oilcloth, $3.60; postage, $2.25.	69 05	
Sovereign Varnishes & Oils, Ltd., polish	2 20	
Geo. Sparrow & Co., utensils and repairs	71 15	
Stewart & Foster, polish	6 25	
Students' Book Dept., note books	1 75	
Toronto General Hospital, medical attendance for injured waiters	6 75	
University Press, printing meal tickets, etc.	101 80	
Women's Welcome Hostel, securing attendants	3 00	
Wrought Iron Range Co., utensils and repairs	23 85	
Superintendent's Dept., labor, $155.87; material, $119.54	275 41	
	$29,675 75	
Superintendent, Miss V. M. Ryley, 12 months to 30th June	1,250 00	
		$30,925 75
		$52,636 54

X. (92) *Royal Ontario Museum.*

University's share of maintenance advanced to the Trustees of the Royal Ontario Museum, under 2 Geo. V., Cap. 80	$14,412 82

XI. (93) *Central Light, Heat and Power Plant.*

Fuel ($27,327.63):		
W. H. Cox Coal Co., fuel	$24,843 36	
Britnell & Co., teaming	2,484 27	
City Electric Current ($1,425.14):		
Toronto Electric Light Co.	1,425 14	
Water ($173.10):		
City Treasurer	173 10	
Repairs and renewals, engineers' supplies and miscellaneous items ($5,403.53):		
Armstrong Cork and Insulation Co., pipe covering	352 04	
Babcock & Wilcox, copper hose, gauge glasses, etc.	40 70	
Canadian Allis-Chalmers, skylights	79 47	
Canadian Cleaning Co., cleaning windows	6 00	
Collett's Carriage Works, forging	61 65	
Elevator Specialty Co., commutator	18 00	
Geo. W. Grant & Co., oil	4 25	
Imperial Oil Co., oil	3 00	
H. W. Johns-Manville Co., pipe covering	242 81	
Kent's, Ltd., smoke spectacles	3 75	
A. Matthews, repairs	20 50	
McColl Bros. & Co., oil	5 35	
James Morrison Brass Mfg. Co., repairs	2 50	
Murphy Iron Works, repairs	71 35	
R. Robertson & Sons, fire brick and masonry	493 46	
L. J. Rogers, analysis of fuel	38 00	
Schaeffer & Budenberg, charts	95	
University Press, dials	7 15	
Freight and duty charges	94 24	

XI. (93) *Central Light, Heat and Power Plant.*—Continued.

Superintendent's Dept., labor, $1,613.21; material, $2,245.15.	3,858 36	
Engineers, firemen and helpers ($7,909.37):		
Chief engineer, Chas. Moseley, Sr., 12 months to 30th June	2,000 00	
Assistant Engineers:		
C. S. Moseley, 12 months to 30th June	900 00	
W. Smith, 12 months to 30th June	900 00	
D. McMaster, 1 month and 25 days at $60.00 per month, $110.00; 9 months at $70.00 per month, $630.00	740 00	
J. Sandie, 1 month and 7 days at $75.00 per month	92 50	
Firemen and helpers:		
At $65.00 per month	32 50	
At $60.00 per month	2,182 00	
At $50.00 per month	802 50	
At 30 cents per hour	126 62	
At 25 cents per hour	133 25	
		$42,238 77

XII. (94) *Contingencies.*

City Treasurer, local improvement taxes for 1915 on 11 Queen's Park, $20.83; 85 St. George Street, $12.47	$33 30	
H. H. Williams & Co., reports *re* ground rentals, etc.	63 11	
Walter L. Breckell, copy of proceedings at Medical Commission sessions	32 55	
Clarkson, Gordon & Dilworth, assistance to Superintendent of Buildings and Grounds, in preparing report *re* cost of operating power plant at Toronto General Hospital, to ascertain University's share for supply of heat and light to Pathological Building	110 00	
D. J. Clark, to make up short payment of salary for half month in the year 1891, June 16th to 30th	20 00	
E. Repath, to make up short payment of salary for half month in the year 1893, June 16th to 30th	21 00	
Pringle & Booth, photographs of University shields	15 00	
Mackenzie & Co., hanging portraits in Hart House	3 70	
Association of Urban Universities, annual dues	10 00	
Dunlop's, Toronto, flowers for funerals of the late Mrs. Lillian Massey Treble and Prof. E. J. Kylie	80 70	
The Varsity, for copies of War Supplement sent to subscribers to Toronto and York Patriotic Funds (subscriptions of $5.00 and over)	281 25	
Setting up Honor Roll ($62.60):		
Students' Book Dept., crest	6 75	
Superintendent's Dept., labor, $41.21; material, $14.64	55 85	
Repairs to President's house ($1,047.12):		
E. Dietzgen Co., prints	28	
T. Eaton Co., decorating	161 55	
Elliott & Brown, excavating and plastering	204 00	
Forbes Roofing Co., repairs	27 73	
A. Matthews, repairs	5 15	
R. Robertson & Sons, concrete walks	13 28	
Routery Bros., plastering	9 00	
Superintendent's Dept., labor, $330.19; material, $295.94	626 13	
		$1,780 33

XIII. (95) *Capital Account Charges.*

Accountant, Supreme Court of Ontario, seventh annual payment on debenture issue of 1909	$25,260 00
Accountant, Supreme Court of Ontario, first annual payment on debenture issue of 1915 *re* Hart House	5,975 00
Toronto General Hospital, fifth annual payment on debenture issue of 1911 *re* Pathological Building	6,568 00
Toronto General Hospital, fifth annual payment on debenture issue of 1911 *re* grant to Toronto General Hospital	15,157 00

XIII. (95) *Capital Account Charges.*—Continued.

Wardrop Estate, first instalment on purchase of house, No. 8 Queen's Park	750 00	
Repayment to Endowment on account of advance for construction of Central Power House, tunnels and equipment	20,208 00	
	$73,918 00	
Less surplus on sale of Hart House debentures applied on first annual payment	2,249 89	
		$71,668 11
		$912,358 95

APPENDIX IV.

University Press.

Transactions for year ending 30th June, 1916.

Receipts 1915-16		$32,406 81	
Accounts receivable on 30th June, 1916		3,493 99	
			$35,900 80
Expenditures 1915-16 (detailed below)		$33,531 40	
Value of supplies bought in advance and on hand 30th June, 1916	$1,731 00		
and work in progress	189 00		
	$1,920 00		
Less liabilities	319 00		
		1,601 00	
			31,930 40
			$3,970 40
Deduct:			
Accounts of former years written off as uncollectable		$82 55	
Expenditures on additions to type and equipment, charged to year's receipts (detailed below)		499 76	
Purchases in advance (net), as above		1,601 00	
			2,183 31
			$1,787 09
Balance of 30th June, 1915			3,031 04
At credit of account 30th June, 1916 (Schedule 4*b*)			$4,818 13

Details of Expenditure, Operating Account.

R. J. Hamilton, Manager, 12 months to 30th June, $1,800.00; Allowance for clerical assistance, $200	$2,000 00	
Pay lists, wages of employees	18,474 07	
		$20,474 07
Supplies and General Maintenance ($12,931.83):		
Adams Cellboard Co., paper	$5 25	
Aikenhead Hardware, knives	3 25	
Alexander & Cable, lithographing	35 00	
Art Metropole, paper and supplies	38 38	
Ault & Wiborg, ink	69 34	
Barber-Ellis, Ltd., paper	792 45	
Richard C. Bourne, leather covers	189 00	
Brigdens, Ltd., half-tones	169 67	
Brown Bros., paper and supplies	1,986 29	
Buntin-Reid Co., paper	705 27	
The Bursar, postage supplied	191 70	
Charles Bush, ink	147 85	
Cambridge Botanical Supply Co., paper	4 51	
Canada Paper Co., paper	124 55	
Canada Printing Ink Co., ink	15 81	
Edward Carroll, grinding knives	7 50	
Climax-Baler Co., wire	3 00	
Copp, Clark Co., binding, etc.	128 10	
Dennison Mfg. Co., labels and bands	22 02	
John Dickinson Co., paper	592 78	
H. Disston & Son, knife	16 56	
Dominion Paper Box Co., tubes	20 25	
Elevator Specialty Co., repairs	41 40	
Five-in-One Letter Envelope Co., envelopes	14 75	
W. J. Gage & Co., paper, envelopes and binding	381 15	
Gill Bros., examination books and ruling	258 20	
Goldsmith Bros., gold leaf	23 50	
Grand & Toy, blank books and stationery	139 83	

Details of Expenditure, Operating Account.—Continued.

R. J. Hamilton, disbursements:		
Cleaning, $120.00; postage and car fares, $78.43; ribbons, thread, etc., $11.69; express and freight, $9.08; wagon, $6.75; embossing seal, $5.00; laundry, $4.80; sundries, $11.35	247 10	
Geo. M. Hendry Co., supplies	4 70	
Imperial Oil Co., oil	15 13	
P. Jacobi, leather	2 20	
Kee-Lox Mfg. Co., carbon paper	6 00	
Kilgour Bros., cardboard	2 21	
Lanston Monotype Machine Co., repairs and machine parts	206 59	
Littlejohn & Vaughan, printing	9 70	
H. J. Logan, wire	20 80	
Lowe-Martin Co., folders	36 47	
McFarlane, Son & Hodgson, paper	159 41	
Manton Bros., ink rollers	27 80	
Miller & Richard, supplies	28 82	
J. L. Morrison Co., supplies	2 50	
National Typewriter Co., carbon paper	119 76	
Paste & Gum Co., paste	11 50	
B. Pearce Envelope Co., envelopes	6 00	
Printers' Specialties, paper, ruling, etc.	17 80	
Provincial Paper Mills, paper	3,986 87	
Ratcliff Paper Co., paper	24 39	
Remington Typewriter Co., carbon and ribbons	10 00	
Shackell, Edwards & Co., ink	48 13	
Shurly & Derrett, twine	5 31	
Southam Press, Montreal, printing meal tickets	88 12	
Southam Press, Toronto, leads and rule	21 10	
Standard Embossing Co., embossing	178 05	
W. J. Stewart, ruling	126 98	
Students' Book Dept., stationery and supplies	93 78	
Ross Taylor, plate	5 00	
Telfer Mfg. Co., boxes	93 17	
F. S. Thomas & Co., ruling	133 43	
Toronto Delivery & Cartage Co., cartage	45 78	
United Typewriter Co., carbon and supplies	286 40	
West & Butler, sewing	8 50	
Whaley, Royce & Co., engraving	31 50	
Wilson, Munroe & Co., paper	145 56	
Freight charges	3 50	
Petty items (5)	6 56	
Superintendent's Dept., labor, $18.44; material, $32.41	50 85	
Heat, light and power charges under report adopted by Board:		
Heat, $92.50; electric current, $300.00; gas, $94.50	487 00	
		$12,931 83
Advertising ($125.50):		
Acta Victoriana	$25 00	
The School	60 00	
The Varsity	40 50	
		$125 50
		$33,531 40

Details of Expenditure, Plant Account.

Canada Metal Co.	$291 05	
Lanston Monotype Machine Co., type	11 06	
Miller & Richard, type, etc.	63 26	
J. L. Morrison Co., cutter and punch	17 50	
Stephenson, Blake & Co., equipment	116 89	
		$499 76

APPENDIX V.

Antitoxin Laboratory.

Transactions for year ending 30th June, 1916.

Receipts during 1915-1916:			
Ordinary account	$38,859 55		
Tetanus branch	5,154 50		
		$44,014 05	
Accounts receivable for work completed and not paid for:			
Ordinary account	$13,118 19		
Tetanus branch	990 00		
		14,108 19	
			$58,122 24
Operating expenses (detailed below):			
Ordinary account		$46,930 36	
Tetanus branch	7,460 71		
Less balance of Dominion Government grant of $5,000.00, brought forward from 1915-16	1,926 59		
		5,534 12	
		$52,464 48	
Sundry refunds during year		676 05	
Accounts written off as uncollectable		107 06	
			53,247 59
			$4,874 65
Carried to Capital Account to write down the same to $1.00			683 65
Balance unappropriated on 30th June, 1916 (Schedule 4*b*)			$4,191 00

Details of Expenditure, Operating Account.

Salaries, wages and occasional assistance ($7,534.36):	
Dr. J. G. Fitzgerald, Director, 12 months to 30th June (paid also in Hygiene)	$2,650 00
Miss A. Homer, Assistant Director and Chemist, 2 months to 31st August, at $750.00 per annum (paid also from Medical Research Fund)	125 00
Laboratory and office assistance:	
Miss L. Hanna, 12 months to 30th June	660 00
Miss O. Sheringham, 12 months to 30th June	600 00
Wm. Knowles, 12 months to 30th June	600 00
Miss H. Lamont, 12 months to 30th June	540 00
Miss F. Gurley, 22nd September to 24th November, at $45.00 per month	93 00
Miss E. Leathley, 7th February to 8th March, $30.00; 16th to 31st March, $24.00	54 00
Miss E. Mitchell, 26th March to 30th June, at $40.00 per month	128 33
Miss D. Smith, 12 months to 30th June	240 00
James Smith, 12 months to 30th June	240 00
Miss Q. Nicholson, 1st July to 20th May, at $20.00 per month	215 00
Thomas Cass, 19th April to 30th June, at $20.00 per month	47 00
Stablemen and assistants:	
B. Double, 12 months to 30th June	600 00
W. Fenton, 12 months to 30th June	300 00
S. Little, 12 months to 30th June	240 00
Occasional assistance:	
W. H. Holmes, 124 hours at 25c. per hour, $31.00; car fares, $8.85	39 85
Miss H. Noakes, 4th to 18th October, $8.62; 1st to 19th March, $26.00, at $16.00 per month	34 62
W. R. Hamilton, verifying monthly statements, 5 at $5.00	25 00

Details of Expenditure, Operating Account.—Continued.

Miss C. Bogue, 3 weeks to 30th June, at $6.00 per week.	18 00	
Miss M. Slute, 3½ weeks to 30th June at $5.00 per week	17 50	
Miss E. Coyne, 1st to 23rd February, at $20.00 per month	15 33	
Miss N. Ingram, 16th March to 8th April, at $16.00 per month	12 00	
Payments under $10.00 (8)	39 73	
		$7,534 36
Laboratory supplies and maintenance ($39,396.00):		
Aikenhead Hardware, hardware	$67 38	
Dr. H. M. Alexander & Co., serum and supplies	12,052 67	
Allen Mfg. Co., laundry	17 11	
The Baird Co., needles	2 27	
F. S. Banks & Co., syringes and containers	6,055 11	
Dr. E. J. Banzhaff, refining serum, $1,986.76; consultation fees and expenses, $100.15	2,086 91	
Berkefeld Filter Co., cylinders	307 40	
The Bursar, postage supplied	536 00	
B. Cairns, rubber stamps	10 25	
J. A. Campbell, medical attendance	9 00	
John Catto & Son, cloth	25 83	
Caulfield, Burns & Gibson, coats	40 50	
A. Churly, blacksmithing	18 25	
City Treasurer, taxes, Barton Avenue stable, $30.91; water, $4.73	35 64	
Clayton Meat Co., meat	72 74	
Dr. H. B. Coleman, purchase of stock, goodwill, etc., of vaccine farm, $1,000.00; vaccine, $421.00	1,421 00	
Collett-Sproule, boxes	85 72	
Cox & Andrew, signs	9 50	
Sarah E. Cuthbert, rent of stable, Barton Avenue, 12 months to 7th October, 1916	60 00	
Wm. Davies Co., meat	71 18	
F. C. Davis, repairs	6 75	
Dr. R. D. Defries, travelling expenses, $267.65; petty disbursements, $18.15	285 80	
Dominion Glass Co., bottles	794 25	
E. W. Duke, fodder and oil	25 35	
T. Eaton Co., wagon, $125.00; harness and tools, $111.20; needles and chemicals, $257.60	493 80	
Harry Edwards, mailing circulars	38 95	
Eimer & Amend, corks and chemicals	19 05	
Elliott & Brown, cutting doorway	20 00	
E. B. Estes & Sons, boxes	247 43	
Wm. Fenton, baskets, etc.	22 00	
Firstbrook Box Co., boxes and sawdust	109 76	
Dr. J. G. Fitzgerald, disbursements: telegrams and telephone messages, $70.76; laboratory supplies, $69.77; stable supplies, $22.45; rabbits and guinea pigs, $10.05; hardware, oils, etc., $44.50; express and cartage, $56.33; car fares, $67.35; livery, $4.50; customs entries, $20.40; labor, $14.90; postage, stationery and sundries, $26.09.	407 10	
Fletcher Mfg. Co., kettle	4 25	
W. J. R. Fowler, horses, $400.00; medical attendance, $39.00	439 00	
General Chemical Co., chemicals	119 15	
Goodyear's India Rubber Selling Co., bulbs	25 15	
Grand & Toy, stationery supplies	6 00	
Gutta Percha & Rubber, Ltd., corks	97 45	
J. F. Hartz Co., filter paper and chemicals	159 70	
Health Department, City of New York, serum	6,340 42	
G. Henderson, horse	35 00	
Geo. M. Hendry Co., blackboard	2 50	
Higgin Mfg. Co., screens	33 75	
Holtby Bros., hay	34 50	
Ingram & Bell, incubator and supplies	259 70	
Journal of Infectious Diseases, subscription	5 05	
Lake Simcoe Ice Supply Co., ice	174 80	

Details of Expenditure, Operating Account.—Continued.

Lymans, Ltd., Montreal, flasks	12 00	
C. D. Magee, vial boxes, etc	190 00	
Mrs. C. Maniger, laundry	24 55	
McAinsh & Co., book	4 00	
John McGillian, fodder, $460.00; horses, $75.00	535 00	
F. D. Mezen, glass-blowing	14 15	
Model Incubator Co., incubator	14 00	
H. P. Norris, fodder	41 00	
Office Specialty Mfg. Co., desk, chair, etc.	32 15	
Ontario Laundry Co., laundry	37 52	
Page Wire Fence Co., fencing	77 25	
Paste & Gum Co., paste	3 75	
D. Pearcy, harness	10 15	
Powers, Weightman, Rosengarten Co., chemicals	355 16	
J. W. Pratt Co., filter paper	34 15	
T. G. Rice Wire Mfg. Co., wire cloth	20 25	
Richards Bros., pans	5 60	
Richards Glass Co., glassware	188 42	
Rockefeller Institute for Medical Research, covers, weights, etc.	37 39	
Sheet Metal Products Co., cans	24 90	
Robert Simpson Co., camp cots and cotton	22 00	
Mrs. E. Smith, rent of stable, Euclid Avenue, 6 months to 31st December	36 00	
Wm. Staughton, fodder	22 40	
Sterling Actions & Keys, Ltd., containers	250 00	
C. Stewart, test tube racks and repairs	15 00	
Thermos Bottle Co., containers	11 30	
Arthur H. Thomas Co., chemicals	84 01	
Thompson, Ahern & Co., shipping charges	92 24	
A. M. Thorne Co., paper	6 65	
Samuel M. Thorne, paper and twine	58 00	
George Tiemann & Co., needles	4 05	
Toronto Dog and Cat Hospital, animals	239 50	
Toronto Hydro-Electric System, current, at Barton Avenue stable	8 49	
United Typewriter Co., rent of typewriter	8 70	
University Press, printing and stationery	678 33	
Veterinary Specialty Co., operating table	180 90	
Williams & Wilkins Co., subscriptions	9 10	
John Williamson, fodder	948 89	
Wrinch, McLaren & Co., needles	47 25	
Wrought Iron Range Co., boiler and utensils	37 52	
Petty items (6)	6 85	
Freight and duty charges	1,004 00	
Superintendent's Dept., labor, $492.97; material, $271.19; long distance telephone calls, $19.05	783 21	
	$39,406 90	
Less sundry credits:		
Sale of cot, $2.90, sale of wagon, $8.00	10 90	
		$39,396 00
		$46,930 36

TETANUS BRANCH.

Salaries and wages:		
Dr. R. D. Defries, special assistant, 12 months to 30th June	$1,500 00	
Stablemen and laboratory assistants:		
A. Size, 12 months to 30th June	600 00	
F. Scruby, 12 months to 30th June	600 00	
W. Hamilton, 4th August to 31st May, at $480.00 per annum	396 40	
A. Mann, 1st to 31 July; 1st September to 15th May, at $480.00 per annum	380 00	
A. Elmer, 19th April to 30th June, at $480.00 per annum, $94.00; overtime, $4.50	98 50	

Tetanus Branch.—Continued.

G. Dunsheath, 1st July to 24th August, at $480.00 per annum, $71.20; overtime, $2.00	73 20	
Miss E. Coyne, 1st October to 31st December, at $240.00 per annum	60 00	
Payments under $10.00 (2)	9 80	
		$3,717 90
Laboratory supplies and maintenance ($3,742.81):		
Aikenhead Hardware, hardware	$7 38	
City Treasurer, water	9 27	
Clayton Meat Co., meat	161 50	
Connell Anthracite Mining Co., fuel at stable	18 75	
Consumers' Gas Co., gas at Temperance Street stable	21 00	
Wm. Davies Co., meat	12 33	
Dr. R. D. Defries, travelling expenses	29 50	
T. Eaton Co., crocks	4 80	
Faramel, Ltd., fodder	60 98	
Wm. Fenton, baskets	4 50	
I. Febus, heater, stove and connections	14 05	
Dr. J. G. Fitzgerald, purchases of hay at market	1,147 61	
W. J. R. Fowler, medical attendance	22 75	
J F. Hartz Co., sterilizers, flasks, etc.	76 40	
Ingram & Bell, medical supplies	28 15	
Lake Simcoe Ice Supply Co., ice	32 87	
Lymans, Ltd., Montreal, chemicals	11 63	
S. W. Marchment, removing manure	159 00	
John McGillian, fodder	91 00	
J. Nelson, removing manure	4 00	
T. Potton, board of men at Concord farm	25 50	
T. C. Rochford, fodder	57 90	
Rogers Electric Co., electric wiring	15 88	
Wm. Staughton, fodder	578 73	
C. Stewart, syringe and repairs	13 80	
James Stewart, lumber and netting	30 32	
Thompson, Ahern & Co., shipping charges	56 18	
Wm. Thurgarland, carpentry	69 20	
A. Tilson, horse	40 00	
Toronto Dog and Cat Hospital, animals	211 00	
Toronto Electric Light Co., current at Temperance Street stable, $42.88; lamps, $3.00	45 88	
Andrew Wright, repairs to drain	14 60	
Wrought Iron Range Co., pots	7 80	
Assistance at bleeding of horses:		
Wm. Fenton	95 00	
Wm. Hamilton	59 00	
A. Size	47 00	
Nightwatchman service at Temperance Street premises:		
B. Double, 6 nights	12 00	
A. Elmer, 9 nights	18 00	
Petty items (3)	4 74	
Superintendent's Dept., labor, $238.16; material, $184.65	422 81	
		$3,742 81
		$7,460 71

Statement of Dr. Fitzgerald, Director, of the value of supplies on hand 30th June, 1916.

Biological Products:	
Antitoxin, serums, vaccine, etc.	$7,941 00
Animals:	
Horses, rabbits, guinea pigs	7,016 80
Laboratory supplies.	
Chemicals, glassware, stationery, etc.	2,952 00
	$17,909 80
Less liabilities	155 10
	$17,754 70

APPENDIX VI.

Superintendent's Stores and Sundry Labor Account.

Ledger balance, 30th June, 1915		$2,100 67
Purchases during 1915-16:		
Adams Mfg. Co., hardware	$54 54	
Advance Oil & Supply Co., brushes, cleaning material and oil	161 84	
Aikenhead Hardware, hardware	174 82	
Babcock & Wilcox, guage glasses and washers	18 00	
Basters, Jackson Co., lamps	226 88	
Wm. Blaikie, castings	52 81	
W. D. Bothwell, lamps	10 50	
British Aluminium Co., aluminium	6 25	
W. R. Brock Co., cloth	95 84	
Burke Furnace Co., fire brick	29 00	
W. Calder & Son, forgings	17 70	
Canada Glass, Mantels & Tiles, Ltd., glass	54 00	
Canada Hardware, hardware	427 55	
Canada Metal Co., solder	31 27	
Canadian General Electric Co., electrical supplies	159 86	
Canadian H. W. Johns-Manville Co., pipe covering	74 91	
Canadian Powers Regulator Co., thermostat	18 38	
Central Electric Supply Co., electrical supplies	562 65	
Chapman & Walker, electrical supplies	237 56	
Cooke & Boulton, wax	84 00	
Diamond Cleanser Co., cleaning material	16 76	
Dominion Radiator Co., steamfitters' supplies	1,303 92	
C. H. Dudley & Co., lamps	12 48	
C. A. Dunham Co., traps, etc.	573 98	
Eagle Lock Co., locks	41 60	
T. Eaton Co., towelling and sheeting, etc.	201 50	
H. P. Eckhardt & Co., cleaning material	205 36	
E B. Eddy Co., toilet paper	314 95	
Electric Specialty & Supply Co., electrical supplies	819 69	
Elevator Specialty Co., coils	46 00	
Fletcher Mfg. Co., dust pans	8 82	
Forbes Roofing Co., screens	15 00	
Garlock Packing Co., waste	195 06	
T. H. Hancock, lumber	1,697 25	
E. Hansard, caneing chairs	9 75	
Harbison-Walker Refractories, fire brick	36 60	
Hardware Co. of Toronto, hardware	460 80	
Geo. M. Hendry Co., blackboard supplies	52 89	
Hydro-Electric Specialty & Supply Co., electrical supplies	313 72	
Interlake Tissue Mills, towels	407 00	
International Engineering Works, packing	17 25	
Kee-Lox Mfg. Co., carbon paper	15 00	
Warden King, steamfitters' supplies	39 03	
R. Laidlaw & Co., lumber	37 87	
John Leckie, rope	13 30	
J. T. W. Low, felt	5 75	
Lyman Bros. & Co., chamois and sponges	26 01	
A. Matthews, piping, etc.	249 53	
McColl Bros. & Co., oil and soap	479 86	
A. McCrimmon, cleaning material	9 80	
Metropolitan Engineering Co., boxes	8 30	
James Morrison Brass Mfg. Co., plumbers' supplies	1,306 90	
H. Mueller Mfg. Co., strainers	8 05	
Munderloh & Co., lamps	436 88	
Murphy Iron Works, furnace parts	370 80	
Murray-Kay, Ltd., cork carpet	23 08	
National Typewriter Co., ribbons	18 88	
H. W. Nelson & Co., mop cloths	47 55	
H. W. Norman, ladder	40 00	
Northern Electric Mfg. Co., cable, starter and electrical supplies	402 89	

Superintendent's Stores and Sundry Labor Account.—Continued.

Ontario Lime Co., lime	63 97	
Ontario Rubber Co., rubber	10 34	
Ontario Soap & Oil Co., oil and soap	65 66	
Otis-Fensom Elevator Co., contacts	12 30	
Pease Foundry Co., boiler	46 30	
Pedlar People, sheet metal	8 32	
N. L. Piper Railway Supply Co., oil	20 30	
Planet Bicycle Co., hubs, etc.	6 00	
Reid & Brown Structural Steel & Iron Works, castings, rollers, etc.	207 90	
P. L. Robertson Mfg. Co., screws	18 61	
Rogers Electric Co., electrical supplies	14 48	
Sanderson, Pearcy & Co., paint, oils and glass	2,692 62	
Sangamo Electric Co., lamps	100 30	
Scythes & Co., waste	41 01	
Sheet Metal Products Co., galvanized iron	28 64	
Shelton Electric Co., heating elements	13 30	
Robert Simpson Co., wallpaper	63 06	
Standard Foundry Co., castings	95 53	
Standard Sanitary Mfg. Co., plumbers' supplies	1,711 60	
Sturgeons, Ltd., paper	29 70	
Tablet & Ticket Co., letters	17 40	
W. H. Taylor & Co., brushes	10 90	
Toronto Brass Mfg. Co., locks and brackets	88 50	
Toronto Electric Light Co., radiator	12 60	
Toronto Hydro-Electric System, heaters	12 00	
Toronto Wood Turning Works, patterns	34 28	
Triplex Weather Strip Co., weather stripping	72 20	
University Press, stationery, baskets and paste	19 02	
Volt Electric Co., lamps	41 12	
West Disinfecting Co., disinfectant	16 00	
White & Sargent, mop cloths	70 00	
Freight and duty charges	209 73	
Items under $5.00 (20)	46 25	
		$18,688 16
		$20,788 83
Sundry Labor, as per pay lists:		
Carpenters	$7,050 36	
Electricians	3,928 77	
Painters	2,703 05	
Plumbers and steamfitters	5,661 20	
Laborers, firemen, etc.	8,590 46	
Cleaners	17,479 33	
		45,413 17
		$66,202 00

Apportionment of the foregoing:

	Labor.	Material.
Administration ($8,604.62):		
Bursar's Office	.....	$3 30
Registrar's Office	$7 19	10 55
Superintendent's Office	2 68	1 76
Library Building	799 74	307 29
Library Current	29 55	28 20
Gymnasium Building	402 63	72 73
Gymnasium: Aid to Athletics	.....	82 00
Convocation Hall	823 21	257 85
Grounds	5,183 76	402 02
Examinations	11 96	
General incidentals	178 20	
Faculty of Arts ($10,405.62):		
Main Building	3,188 84	1,138 87
Biological Building	814 83	314 32
Biological Department	180 08	76 11
Botanical Department	184 95	127 53

Superintendent's Stores and Sundry Labor Account.—Continued.

	Labor.	Material.
Bio-Chemical Department	59 07	73 17
Physiological Department	95 16	123 67
Chemical Building	932 48	229 89
Chemical Department	277 86	212 57
Physical Chemistry Department	.....	3 60
Physics Building	1,494 64	401 33
Physical Department	49 62	82 27
Astro-Physical Department	160 02	87 32
Geological Department	1 27	18 40
Mineralogical Department	9 91	5 11
Psychological Department	36 80	16 74
Mechanics Department	2 95	2 73
Political Science Department	1 90	90
History Department	.....	21
Ethics Department	.....	50
Faculty of Medicine ($3,054.08):		
Anatomical Department	56 48	41 51
Pathological Department	39 21	39 37
Chemical Pathology Department	21 00	14 97
Pharmacy Department	67	18 28
Medical Building	1,286 94	309 03
Pathological Building	931 31	256 49
General Expenses	68	07
Medical Research Fund	27 89	10 18
Faculty of Applied Science ($8,209.22):		
Chemistry and Mining Building	2,349 19	795 07
Engineering Building	1,813 50	375 37
Thermodynamics Building	319 83	221 38
Observatory Building	225 62	85 78
Electrical Engineering Department	105 68	140 60
Mechanical Engineering Department	99 28	199 46
Applied Mechanics Department	15 73	46 52
Mining Engineering Department	261 61	238 81
Metallurgical Engineering Department	139 95	282 84
Surveying Department	19 03	22 53
Applied Chemistry Department	106 97	88 41
Electro-Chemistry Department	108 09	26 60
Department of Architecture and Drawing	36 53	40 52
Department of Engineering Physics and Photography	13 26	21 96
General Expenses	4 74	4 36
Faculty of Household Science ($1,394.44):		
Household Science Building	1,157 62	232 82
Household Science Department	.....	4 00
Faculty of Education ($3,101.20):		
Education Building	1,610 74	670 88
Education Department	525 52	294 06
Faculty of Forestry ($506.48):		
Forestry Building	311 31	91 19
Forestry Department	53 43	50 55
University Extension and Social Service Courses ($2,206.92):		
Social Service Building	1,080 28	544 79
Social Service Department	174 82	407 03
Residences and Dining Hall ($6,799.36):		
Men's Residences	4,240 84	1,048 33
Women's Residence Buildings	540 44	522 35
Women's Residence Housekeeping Account	.....	171 99
Dining Hall	155 87	119 54
Royal Ontario Museum	3,731 65	1,140 15
Central Power Plant	4,890 08	2,245 15
University Press	18 44	32 41
Antitoxin Laboratory Operating Account	492 97	271 19
Antitoxin Laboratory Tetanus Account	238 16	184 65

Superintendent's Stores and Sundry Labor Account.—Continued.

	Labor.	Material.	
Alterations and repairs to sundry properties, various incidental accounts, etc.....	2,153 51	1,737 19	
Work done for members of the staff, etc. (including accounts receivable on 30th June, $592.61)	1,125 00	1,207 55	
Sundry cash sales	.....	185 53	
	$45,413 17	$18,522 40	
			$63,935 57
Ledger balance 30th June, 1916 (Schedule 5*a*).....			$2,266 43

REPORT

OF THE

Secretary and Registrar

OF THE

PROVINCE OF ONTARIO

FOR THE YEAR
ENDING 31st DAY OF OCTOBER

1916

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
1917

Printed by
WILLIAM BRIGGS
Corner Queen and John Streets
TORONTO

To His Honour SIR JOHN STRATHEARN HENDRIE, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Commander of the Royal Victorian Order, a Colonel in the Militia of Canada, etc., etc., etc.

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned begs respectfully to present to Your Honour the Report prepared with respect to the chief transactions of the Department of the Secretary and Registrar of the Province of Ontario during the year ending the 31st day of October, 1916.

W. D. McPHERSON,

Secretary and Registrar of the Province of Ontario.

PROVINCIAL SECRETARY'S OFFICE,
Toronto, March 9th, 1917.

REPORT

OF THE

SECRETARY AND REGISTRAR

OF THE PROVINCE OF ONTARIO

For the Year ending 31st day of October, 1916

PROVINCIAL SECRETARY'S OFFICE,

TORONTO, March 9th, 1917.

To the Honourable

WILLIAM DAVID MCPHERSON, ESQ., K.C., M.P.P.,

Secretary and Registrar of the Province of Ontario.

SIR,—I beg leave to submit the Annual Report of the Provincial Secretary's office for the year ending October 31st, 1916, showing details of the various services rendered by the office during that period.

The following table shows the fees as they were received month by month:

STATEMENT OF OFFICE FEES RECEIVED, BY MONTHS, 1916.

November	$10,375 56
December	6,769 65
January	16,610 00
February	24,176 25
March	11,950 22
April	9,767 24
May	16,842 48
June	10,310 04
July	8,212 00
August	7,977 65
September	9,625 40
October	7,889 91
Total	$140,506 40

STATEMENT OF SOURCES OF FEES RECEIVED DURING 1916.

Letters Patent, Licenses, etc.	$109,276 00
Companies' Returns	27,597 00
Commissions	1,530 00
Certificates	164 00
By-laws, Copies, etc.	1,939 40
	$140,506 40

NUMBER OF CHARTERS AND LICENSES ISSUED.

Year.	Number of Instruments.	Fees.
1892	158	$6,780 00
1893	138	8,465 00
1894	139	7,729 00
1895	174	10,000 00
1896	154	14,335 00
1897	358	34,650 00
1898	295	23,820 00
1899	416	60,817 00
1900	438	71,179 00
1901	450	75,782 00
1902	591	95,330 00
1903	578	107,166 00
1904	673	87,177 00
1905	828	108,621 00
1906	1,045	181,998 11
1907	1,067	227,312 90
1908	924	132,252 50
1909 (ten months)	828	171,695 80
1909-10	1,110	183,780 45
1910-11	1,211	235,662 10
1911-12	1,288	232,079 05
1912-13	1,305	232,364 35
1913-14	1,120	176,270 05
1914-15	1,080	80,744 75
1915-16	1,265	109,276 00

The usual Tables and Appendices accompany this Report.

All of which is respectfully submitted.

F. V. JOHNS,

Acting Assistant Provincial Secretary.

List of Companies Incorporated for the Year, 1916, ending October 31st.

Name.	Address.	Capital.
A.		
Arena of London, Limited, The	London	$40,000
Auto Parts Repair Company, Limited	Toronto	40,000
Alliance Beverage Company of Toronto, Limited, The	Toronto	50,000
Abso Pure Ice Company, Limited	Hamilton	100,000
Algoma Rolling Stock Company, Limited, The	Toronto	40,000
Aabaa Poultry Co., Limited	Angus	10,000
Atkins', Limited	Toronto	40,000
Aeroplane Products, Limited	Toronto	40,000
Atlas Gold Mines, Limited	Toronto	2,000,000
Acme Tire & Rubber Company, Limited	Toronto	400,000
Arnot Construction Company, Limited, The	Toronto	40,000
Addison Rural Independent Telephone Company, Limited	Addison	23,000
Auto-Knitter Hosiery (Canada), Company, Limited	Toronto	40,000
Avery & Hara, Limited	St. Cartharines.	40,000
Atlantic Chemicals, Limited, The	Toronto	40,000
Amm Natural Gas and Gasoline Company, Limited, The	Toronto	2,000,000
Algoma Construction & Engineering Company, Limited	Sault Ste. Marie.	100,000
Adam and Michaud, Limited	Sudbury	40,000
Ardtrea Telephone Company, Limited, The	Ardtrea	1,800
Ahlgren, John, Ladies' Costumes, Limited	Toronto	40,000
Associated Investors, Limited	Toronto	40,000
Attallah Trading Company, Limited	Matheson	40,000
Anglo-American Hotel Company, Limited, The	Toronto	4,500,000
Assets and Securities, Limited, The	Toronto	20,000
Army & Navy Store, Limited	Kingston	100,000
Aurum Mines, Limited	Toronto	1,500,000
B.		
Brandon Shell Company, Limited, The	Toronto	100,000
Blenheim Skating Rink Company, Limited	Blenheim	10,000
Barrymore Cloth Company, Limited, The	Toronto	250,000
Burtons, Limited	Toronto	40,000
Bell's, Limited	Grimsby	40,000
Burton-Munro Mines, Limited	Toronto	1,000,000
Beamsville Basket and Veneer Company, Limited, The	Beamsville	40,000
Boston Creek Mining Co., Limited	Toronto	2,000,000
Beemer & Company, Limited	London	35,000
Beaverton Toy and Foundry Company, Limited, The	Beaverton	60,000
Bayswater Club of Ottawa, Limited	Ottawa	40,000
Barton Feeders, Limited	Hamilton	40,000
Brown Brothers, Limited	Toronto	40,000
Boico, Limited	Toronto	50,000
Byrns Pneumatic Ship Raising Company, Limited	Hamilton	40,000
Burlington Metals Company, Limited	Hamilton	40,000
Big Six Ranch, Limited	Toronto	20,000
Banfield & Sons, Limited, W. H.	Toronto	150,000
Buffalo and Fort Erie Steamship Company, Limited	Fort Erie	100,000
Brophey Doll Company, Limited, The	Toronto	40,000
Boston Gold Leaf Mining Company, Limited	Cobalt	1,000,000
Blind Line Telephone Company, Limited	Woodford	1,300
Baetz Brothers Furniture Company, Limited	Berlin	75,000
Binghams, Limited	Toronto	40,000
Business Properties, Limited	Toronto	1,000,000
Bowesville Telephone Company, Limited, The	Bowesville	3,000
Bruce Mines Trap Rock Company, Limited	Sault Ste. Marie.	150,000
Belmont Theatres, Limited	Toronto	40,000
British Acetones of Toronto, Limited	Toronto	50,000
Beacon Match Company, Limited	Toronto	75,000
Bishop Lumber Company, Limited	Nestorville	300,000
Beaver Theatre Company, Limited	Toronto	40,000

List of Companies incorporated for the year ending October 31st, 1916.—*Continued.*

Name.	Address.	Capital.
Backline Telephone Company, Limited, The	Melancthon	1,400
Bellbirk Porcupine Mines, Limited, The	Toronto	2,000,000
Brockville Homes Building Company, Limited, The	Brockville	40,000
Bentley, Walter Co., Limited, The	Niagara Falls	50,000
C.		
Canadian Dove-Smith, Limited, The	Toronto	40,000
Canada Builders, Limited	Toronto	50,000
Cheney Co-operative Waterworks Company, Limited, The	Cheney	1,500
Canadian Steel and Brass Products, Limited	Toronto	500,000
Consolidated Steel Company, Limited	Toronto	100,000
Commercial Hotel Company, Cobalt, Limited	Cobalt	40,000
Credit River Works, Limited	Toronto	150,000
Canada Soaps, Limited	Toronto	100,000
Connecticut Oyster Company, Limited, The	Toronto	40,000
Canadian Cartridge Company, Limited	Toronto	750,000
Citizen Publishing Company, Limited, The	Ottawa	400,000
Cramp, T. B., Limited	Orillia	40,000
Callander Foundry & Manufacturing Company, Limited, The	Guelph	40,000
Chapman-Ramsay, Limited	London	150,000
Cashel Copper Mines, Limited, The	Toronto	850,000
Cornwall Pants Company, Limited	Cornwall	25,000
Canadian Hardwoods, Limited	Ottawa	150,000
Consumers Heating Company, Limited	Toronto	100,000
Canada Rations Company, Limited	Toronto	200,000
Connaught Hotel Company, Limited	Hamilton	300,000
Cinnamon-Allin, Limited	Lindsay	40,000
Canadian Churchman, Limited	Toronto	40,000
Canadian Steel Specialty Company, Limited, The	Grimsby	100,000
Clipsham, J. E., & Sons, Limited	Gravenhurst	40,000
Cameron Telephone Company, Limited, The	Cameron	5,000
Comfort Mining and Leasing Company, Limited	Cobalt	40,000
Corrugated Paper Box Company, Limited, The	Toronto	200,000
Cobourn Lumber Company, The	Lucknow	40,000
Chemical Products of Canada, Limited	Toronto	40,000
Canada Amusements, Limited	Toronto	40,000
Canadian Mines Location and Development Company, Limited	Toronto	100,000
Caswell Mining Company, Limited, The	Toronto	1,000,000
Clifton Amusement and Catering Company, Limited, The	Toronto	10,000
Canadian Albotrea Clover Company, Limited	Toronto	100,000
Contractors Equipment Company, Limited, The	Toronto	40,000
Commercial Securities Company, Limited	Toronto	40,000
Canada Cereal Company, Limited	Markham	75,000
Colborne Curling Club, Limited	Colborne	5,000
Colonial Chemical Co., Limited, The	Toronto	40,000
Canadian National Features, Limited, The	Toronto	500,000
Croyebert, Limited	Toronto	500,000
Canadian Conley Frog & Switch Company, Limited	Port Arthur	150,000
Canada Broom and Brush Company, Limited, The	Ridgetown	15,000
Clavering Telephone Company, Limited, The	Clavering	1,650
Central Estates, Limited	Toronto	40,000
Canadian Poultry Journal Publishing Company, Limited	Hamilton	20,000
Canada Cleanser Company, Limited	Toronto	100,000
Carola Company of Canada, Limited	Toronto	40,000
Chelmsford Creamery, Limited	Chelmsford	10,000
Canadian Poland Trading Company, Limited	Toronto	40,000
Clavir Hat Manufacturing Company, Limited	Toronto	40,000
Canadian Wood Products, Limited	Toronto	40,000
Canadian Molybdenite, Limited	Toronto	100,000
Colleran Spring Bed Company, Limited	Toronto	40,000
Central Buildings, Limited	Port Arthur	400,000
Campbell, D. L., Limited	Ottawa	40,000

List of Companies incorporated for the year ending October 31st, 1916.—*Continued.*

Name.	Address.	Capital.
Cannon Canadian Company, Limited, The	Toronto	100,000
Central Motors, Limited	Toronto	40,000
Candler, Wm., Co., Limited	Toronto	40,000
D.		
Dumfries, Limited	Toronto	300,000
Derby Telephone Company, Limited, The	Kilsyth	10,000
DeCamps & Company, Limited	Toronto	40,000
Dominion Rand Mines, Limited	Haileybury	100,000
Dominion Salvage & Wrecking Company, Limited, The	Toronto	25,000
Dunfield and Company, Limited	Toronto	150,000
Doyle-Dennert Tractor Company, Limited, The	Essex	150,000
Dawsons Realties, Limited	Niagara Falls	50,000
Dominion Tygard Engine Manufacturing Company, Limited	Toronto	100,000
Drayton Silo Company, Limited, The	Drayton	40,000
Disappearing Propeller Boat Company, Limited	Toronto	45,000
Davidson Lake Mining Company, Limited	Toronto	1,000,000
Dental Company of Canada, Limited, The	Toronto	100,000
Dominion Butchers Supply Company, Limited	Toronto	40,000
Dundas Orchards, Limited	Morrisburg	24,000
Dominion Vaults, Limited	Toronto	100,000
Davidson Gold Mines, Limited	Toronto	2,000,000
Dictating Machine Company, Limited	Toronto	40,000
Dominion Thrasher Company, Limited, The	New Hamburg	40,000
Dore Bay Telephone Company, Limited, The	Germanicus	2,500
Drummond Fuel Company, Limited	Toronto	20,000
E.		
Edwards, E. S., Limited	Toronto	40,000
Electric Welding Company of Toronto, Limited	Toronto	40,000
Edwards, W. G., Company, Limited	Bridgeburg	40,000
Empire Sand and Gravel Company, Limited	Toronto	40,000
Eau Claire Water Works Company, Limited	Tecumseh	40,000
Economy Sales Company, Limited, The	Toronto	100,000
Eldridge Lumber Company, Limited	Toronto	40,000
Empire State Mines, Limited	South Porcupine	2,000,000
Edwards, J. E., & Sons, Limited	Toronto	150,000
Efficiency Sales Corporation, Limited	Toronto	40,000
Empire Hippodrome Company, Limited	Toronto	1,000,000
Electroptypers, Limited, The	Toronto	40,000
Engineers Club, Thorold, Limited	Thorold	40,000
Electric Talking Signs, Limited	Toronto	50,000
Erie Beach Hilarity Co., Limited	Fort Erie	40,000
Electrical Fittings & Foundry, Limited	Preston	48,000
Erie Beach Scenic Railway Company, Limited	Fort Erie	40,000
Erie Beach Amusements, Limited	Fort Erie	40,000
Elmira Planing Mill Company, Limited, The	Elmira	40,000
Elstone Dunkin Mines, Limited	New Liskeard	1,500,000
Exeter Creamery Company, Limited	Exeter	40,000
Essex Bakery Company, Limited	Tecumseh	40,000
Earle & Cook Company, Limited, The	Belleville	40,000
Ely, Limited	Toronto	40,000
F.		
Fox, Chambers, Clancy, Limited	Toronto	40,000
Forty Associates, Limited, The	Hamilton	40,000
Foldens Cheese and Butter Manufacturing Company, Limited, The	Ingersoll	5,000
Fort William Terminal Development Company, Limited, The	Fort William	250,000
Frontier Pulp and Paper Company, Limited	Thorold	50,000

List of Companies incorporated for the year ending October 31st, 1916.—*Continued.*

Name.	Address.	Capital.
Freifeld Fur Company, Limited	Toronto	30,000
Feldspar & Clay Products, Limited	Wiarton	1,500,000
Franco-Canadian Canners' Corporation, Limited, The	Toronto	100,000
Fearman Bros., Limited	Hamilton	40,000
Fulton Mines, Limited	Toronto	500,000
Fort William Docks, Limited	Toronto	500,000
G.		
Greenleafs, Limited	Belleville	40,000
Gilpin, D. M., & Company, Limited	Toronto	250,000
Glen Athol Fruit Farms, Limited	St. Catharines	100,000
Garland Manufacturing Company, Limited, The	Hamilton	100,000
Great Lakes Realty Company, Limited	Port Arthur	100,000
Guppy, H. E., and Company, Limited	Windsor	100,000
Gold Bullion Mines, Limited	South Porcupine	600,000
Gray, John V., Construction Co., Limited	Toronto	40,000
Great Lakes Power Company, Limited, The	Sault Ste. Marie	2,600,000
Garlock Walker Machinery Company, Limited	Toronto	47,500
General Merchandise Exchange, Limited	Toronto	100,000
Gingello, Limited	Toronto	40,000
Gibbard, G. E., Limited	Toronto	40,000
Globe Shock-Absorbing Tire Company of Canada, Limited, The	St. Catharines	1,000,000
Goderich Manufacturing Company, Limited, The	Goderich	100,000
Greb Shoe Company, Limited	Berlin	40,000
Gamble-Robinson, Sudbury, Limited	Sudbury	40,000
Glacier Drinking Water, Limited	Toronto	40,000
Granatstein, M., & Sons, of Toronto, Limited	Toronto	150,000
Griffin Gloves, Limited	Toronto	150,000
Grand's Typewriter Supply, Limited	Ottawa	40,000
Gorrie, A. D., & Company, Limited	Toronto	40,000
Gallagher, W. E., Printing Company, Limited	Kitchener	15,000
Grosz & Hohmeier, Limited	Kitchener	40,000
Grain Products Company, Limited	Fort William	25,000
H.		
Hope Realty, Limited	Ottawa	250,000
Homestead Manufacturing Company, Limited	Niagara Falls	15,000
Harnick, L., and Company, Limited	Toronto	40,000
Hamilton Stock Brick Supply Company, Limited	Hamilton	40,000
Hodgson Brothers Chemical Company, Limited	Lindsay	200,000
Hall Motors, Limited	Toronto	40,000
Hillcrest Cemetery Company of Woodbridge, Limited	Woodbridge	2,400
Hughes, W. L., Limited	Brantford	40,000
Hawley Telephone Company, Limited, The	S. Fredericksburgh	1,200
Hygienic Dairy Company, Limited	Brantford	40,000
Hamilton Shipbuilding and Ferry Company, Limited	Hamilton	100,000
Hager, The John H. Company, Limited	Hagersville	40,000
Haines' Wiltshire Oil Company, Limited	Blyth	50,000
Hollinger Consolidated Gold Mines, Limited	Toronto	25,000,000
Humus Product Company, Limited	London	40,000
Hygrade Knitting Company, Limited, The	Toronto	100,000
Hygienic Containers, Limited	Toronto	100,000
Hennessey Drug Company, Limited, The	Toronto	40,000
Hawkes & Harris Music Company, Limited, The	Toronto	25,000
Hamilton Dry Goods, Limited	Hamilton	20,000
Henry, J. G., Limited	Sudbury	40,000
Hanna Bros. Planing Mills, Limited	Fort Erie	75,000
Hamilton Offices, Limited	Hamilton	40,000
Houpt Paper Mills, Limited	Camden E.	100,000

List of Companies incorporated for the year ending October 31st, 1916.—*Continued.*

Name.	Address.	Capital.
Hamilton Brass, Limited	Hamilton	40,000
Higman, George & Sons, Limited	Ottawa	50,000
Hendun Lumber Company, Limited	Timmins	40,000
I.		
Ideal Foundry & Hardware Company, Limited	Toronto	50,000
Italian Mosaic and Tile Company, Limited	Toronto	40,000
Irwin Vanfleet Company, Limited	Hamilton	20,000
Independent Manifold, Limited	Toronto	50,000
International Copper, Limited	Toronto	150,000
Imperial Canners, Limited	Toronto	200,000
International Lumber and Wood Products Corporation, Limited	Toronto	40,000
Investors and Traders, Limited	Toronto	1,000,000
Ixion Mines, Limited	Toronto	100,000
Ideal Paving Company, Limited, The	Berlin	40,000
International Co-operative Company of Steelton, Limited	Steelton	15,000
Inspiration Gold Mines, Limited	Toronto	2,000,000
Ideal Importing Company, Limited	Toronto	40,000
J.		
James, Loudon and Hertzberg, Limited	Toronto	20,000
Jackson Telephone Company, Limited	Owen Sound	8,000
Jewel Manufacturing Company, Limited	Hamilton	10,000
Jory, P. H., Limited	Haileybury	10,000
K.		
Ketcheson, The H. F. Company, Limited	Belleville	40,000
Kaufman, Jacob, Limited	Berlin	250,000
Kasler Brothers, Limited	Fort William	50,000
Kelly Tobacco Company, Limited, The	London	40,000
Keystone Bedding Company, Limited, The	London	40,000
Kaustine Company, Limited	Toronto	40,000
Kilgour Davenport Company, Limited, The	Toronto	100,000
Kamiskotia Mining Company, Limited	Toronto	2,000,000
Kirk Gold Mines Company, Limited	Toronto	2,000,000
Kutschke & Son, Limited, H.	Pembroke	40,000
Kemp, R. A., Limited	Ottawa	40,000
K. & S. Canadian Tires, Limited	Toronto	250,000
Kingston Smelting Company, Limited	Kingston	30,000
Kirkland Lake Gold Mining Company, Limited	Toronto	2,000,000
Kittinger Gas Company, Limited	Fort Erie	40,000
L.		
Lindsay Builders, Limited	Lindsay	40,000
Lands Development, Limited	Toronto	150,000
Lyons Fuel & Supply Company, Limited	Steelton	40,000
Leonard-Parmiter, Limited	Toronto	50,000
Lester Storage and Cartage Company, Limited	Toronto	70,000
Lindsay Estates, Limited	Toronto	15,000
Lincoln Electric Company of Canada, Limited	Toronto	40,000
Levine Leather Company, Limited	Toronto	40,000
Lakeshore Sand Company, Limited, The	Toronto	50,000
Linington-Connell Company, Limited, The	Toronto	40,000
Lakehead Lands, Limited	Fort William	100,000
Lambton Flax Company, Limited, The	Petrolea	40,000
London Creamery, Limited. The	Toronto	40,000
Lake of Bays Golf Club, Limited	Toronto	20,000
Lindsay Woodworkers, Limited	Lindsay	40,000
Littlejohn Realty Company Limited	Toronto	40,000

List of Companies incorporated for the year ending October 31st, 1916.—*Continued.*

Name.	Address.	Capital.
M.		
McIntyre-Jupiter Mines, Limited	Toronto	2,000,000
McMurtry, W. Blake, Limited	Bowmanville	40,000
McCarthy, The H. B., Company, Limited	Toronto	40,000
Maple Leaf Rink Company, Limited	Toronto	40,000
Miller Independence Mines, Limited	Swastika	500,000
McLean, E. L., Limited	Toronto	40,000
McAllister, Geo., and Sons, Limited	Guelph	40,000
McCooe Rail Anchor Company, Limited	Toronto	40,000
McIvor Gold Mines, Limited	Kirkland Lake	1,000,000
Madawaska Telephone Association, Limited, The	Burnstown	4,000
Machine & Stamping Company, Limited	Toronto	100,000
Metropolitan Glass Company, Limited, The	Toronto	40,000
Mattagami Pulp & Paper Company, Limited	Toronto	4,000,000
Menet-Langton, Limited	Toronto	40,000
Murray, Wm., Co., Limited	Toronto	40,000
McNab Telephone Company, Limited, The	Arnprior	6,250
McRae Porcupine Gold Mines, Limited	Toronto	2,000,000
Motor Exchange, Limited	Toronto	40,000
Martintown Rural Telephone Company, Limited, The	Martintown	5,000
Mecca Specialties Company, Limited	Toronto	40,000
Mono Mills Independent Telephone Association, Limited, The	Mono Mills	15,000
Mallorytown Telephone Company, Limited, The	Mallorytown	20,000
Milton Pressed Brick Company, Limited	Toronto	1,500,000
Maple Leaf Amusement Company, Limited	Toronto	40,000
Mattawan River Mining and Milling Company, Limited, The	Rutherglen	500,000
McBain, William & Company, Limited	Toronto	250,000
Montreal Coal and Dock Company, Limited	Toronto	40,000
McCartney & Burke, Limited	Fort William	20,000
Makers of Canada (Morang), Limited	Toronto	75,000
Mink Lake Rural Telephone Company, Limited, The	Eganville	1,140
Munro, Hugh, Lumber Company, Limited	Toronto	40,000
Magasin Co-operative de Verner, Limited	Verner	10,000
Millbrook Rural Telephone Company, Limited	Millbrook	7,000
Modern Waists, Limited	Toronto	40,000
Mackay Steamship Company, Limited, A. B.	Hamilton	40,000
Milton Foundry, Limited	Milton	40,000
Mount Horeb Telephone Company, Limited, The	Clavering	966
Mine Centre Copper Company, Limited	Port Arthur	300,000
Martin Aeroplanes, Limited	Windsor	100,000
McCallum Granite Company, Limited, The	Kingston	40,000
Maple Leaf Toy Company, Limited	Toronto	40,000
Map and Advertising Company, Limited	Toronto	20,000
Mapes, Frank, Crittenden Company, Limited	Toronto	50,000
Monarch Land Building Company, Limited	Windsor	40,000
Maltese Club of Toronto, Limited, The	Toronto	40,000
McMullen & Lee, Limited	Toronto	40,000
McKelvey & Birch, Limited	Kingston	50,000
Malloy & Bryans, Limited	Toronto	100,000
N.		
Nursery Shoe Company, Limited, The	St. Thomas	50,000
Northland Trading Company, Limited, The	Sault Ste. Marie	40,000
Northampton Mining Company, Limited	Toronto	50,000
Nuray Sign Company, Limited	Toronto	30,000
North Thompson Gold Mines, Limited, The	Toronto	1,375,000
Northland Stores, Limited	Haileybury	40,000
National Mines, Limited	Cobalt	2,000,000
North Victoria Lead Mines, Limited	Toronto	49,500
Napanee Curling, Bowling, Limited	Napanee	10,000

List of Companies incorporated for the year ending October 31st, 1916.—*Continued.*

Name.	Address.	Capital.
North Bay and French River Navigation Company, Limited, The	North Bay	10,000
Norfred Kennels, Limited	Toronto	20,000
Nobility Chocolates, Limited	St. Thomas	100,000
North Cavan Rural Telephone Company, Limited	Ida	450
Newcombe's, Limited	Fort William	40,000
Naval Mint Products, Limited	Toronto	40,000
O.		
O'Reilly, T. E., Limited	Toronto	40,000
Oakwood Lawn Bowling Club, Limited, The	Toronto	40,000
Otter Tail Improvement Company, Limited	Ottawa	30,000
Ontario Garage and Motor Sales, Limited	London	40,000
Ontario Halls Company, Limited	London	50,000
Ontario Groceries, Limited	Toronto	40,000
Ontario Creameries, Limited	Toronto	40,000
Ottawa Moving Picture Company, Limited, The	Ottawa	10,000
Owens-Elmes, Limited	Toronto	40,000
Ontario Bond Corporation, Limited	Toronto	40,000
Ojibway Steel City Land Company, Limited	Windsor	40,000
Omemee Telephone Company, Limited	Omemee	2,700
Ontario Toys, Limited	Toronto	50,000
P.		
Pringle, R. E. T., Limited	Toronto	40,000
Provincial Stone & Supply Company, Limited	Toronto	40,000
Penetanguishene Carriage Company, Limited, The	Penetanguishene	40,000
Precision Manufacturing Company, Limited, The	St. Catharines	60,000
Pope Brothers & Cheppu Co., Limited	Toronto	100,000
Pine River Improvement Association and Country Club, Limited	Toronto	100,000
Presqu'ile Summer Hotel Company, Limited	Toronto	50,000
Pine Grove Milling Company, Limited	Pine Grove	40,000
Perfection Tire and Motor Company, Limited	Hamilton	1,500,000
Pembroke Iron Works, Limited	Pembroke	100,000
Plaola Piano Company, Limited	Oshawa	40,000
Pleasant Valley Telephone Company, Limited, The	Napanee	2,250
Palace Road Telephone Company, Limited, The	Napanee	4,000
Purus Salts Co., Limited, The	Toronto	40,000
Popham, Geo. H., Limited	Ottawa	45,000
Perth Shoe Company, Limited	Perth	100,000
Parkhill Rural Telephone Company, Limited, The	Parkhill	20,000
Peerless Artificial Stone, Limited	Toronto	40,000
Port Hope File Manufacturing Company, Limited, The	Port Hope	40,000
Peerless Pulp Company, Limited	Thorold	30,000
Public Benefit Boot Company, Limited	Toronto	40,000
Pine Plains Theatre Company, Limited	Toronto	30,000
Pathe Freres Phonograph Company of Canada, Limited	Toronto	150,000
Pleasant View Telephone Company, Limited	Owen Sound	750
Pine Lake Lumber Company, Limited	Pickerel Land'g	60,000
Playter Transportation Company, Limited	Owen Sound	40,000
Prudent Realty & Trading Association, Limited, The	Windsor	40,000
Porcupine North Star Gold Mines, Limited	Toronto	2,500,000
Pelco Producing Company, Limited, The	Toronto	40,000
Porcupine-Nighthawk Mines, Limited	Toronto	1,000,000
Pure Fruit Products, Limited	Toronto	40,000
Packard Fuse Company, Limited, The	St. Catharines	200,000

List of Companies incorporated for the year ending October 31st, 1916.—*Continued.*

Name.	Address.	Capital.
Q.		
Quinte Produce Company, Limited	Toronto	20,000
Quance Bros., Limited	Delhi	100,000
Quance, Robert Company, Limited	Delhi	40,000
Queen's Country Club, Limited	Kingston	5,000
R.		
Reo Sales Company of Toronto, Limited	Toronto	40,000
Rowe Hose Supporter Company of Canada, Limited	Toronto	50,000
Record Publishing Company, Limited, The	Niagara Falls	40,000
Regent Theatres Company, Limited	Toronto	350,000
Reliable Delivery Company, Limited	Toronto	100,000
Rooney-Cooper, Limited	Ottawa	20,000
Rosedale Rural Telephone Company, Limited, The	Sydenham	1,505
Rumsey & Co., Limited	Toronto	50,000
Rankin & Co., Limited	Toronto	100,000
Richmond & McKee, Limited	Toronto	40,000
Rochester Lamp Company, Limited	Toronto	40,000
Ruddock Cut Glass Company, Limited, The	Toronto	50,000
Robinson, W., and Son, Limited	Toronto	40,000
Rockwood & Oustic Telephone Company, Limited	Rockwood	5,500
Raymond Telephone Company, Limited	Raymond	1,750
Republic Gold Mines, Limited	Toronto	3,000,000
Richard-Beliveau Company of Ontario, Limited, The	Kenora	20,000
Richam Manufacturing Company, Limited, The	Hamilton	150,000
Reliners, Limited	Stratford	200,000
Renfrew Curling Rink, Limited, The	Renfrew	20,000
Reliance Motor and Tool Company, Limited	Toronto	60,000
S.		
Sanitary Bedding Company, Limited	Toronto	40,000
Sovereign Press, Limited, The	Toronto	40,000
St. Julien Land Company, Limited	Toronto	40,000
Swastika Gold Mines, Limited	Toronto	2,000,000
Sydenham Mica and Phosphate Mining Company, Limited, The	Kingston	50,000
Sable River Copper Company, Limited	Toronto	100,000
Sudbury Nickel, Limited	Sudbury	100,000
Saxon Sales Company, Limited	Toronto	40,000
St. Thomas Pure Milk Company, Limited	St. Thomas	50,000
Scranton Lehigh Coal Company, Limited	Toronto	40,000
Standard Milk Products, Limited	Toronto	150,000
Snyder Snap Button & Fastener Company, Limited	Toronto	40,000
Smart, R. H., Limited	Brockville	75,000
Steacy's, Limited	Kingston	100,000
Sun Chief Gowganda Silver Mines, Limited, The	Toronto	50,000
Sherwood Construction Company, Limited	Toronto	40,000
Sarnia Creamery Company, Limited	Sarnia	100,000
Sure-Shot Manufacturing Company, Limited, The	Pembroke	40,000
Smith, The R. O., Company, Limited	Orillia	50,000
Salisbury, E. F. W., Limited	Toronto	250,000
Standard Terminal Company, Limited	Fort William	40,000
St. Mary's River Construction Company, Limited, The	Sault Ste. Marie	25,000
Summer Theatre Company, Limited	Toronto	21,000
Silverado Mining Company, Limited	Cobalt	1,000,000
Shragges', Limited	Kenora	80,000
Straus Realty, Limited	Windsor	140,000
Sharp, C. W., & Company, Limited	Toronto	50,000
Shannon & Grant, Limited	Hamilton	40,000
Standard Warehousing and Mercantile Company, Limited	Toronto	12,000

List of Companies incorporated for the year ending October 31st, 1916.—*Continued.*

Name.	Address.	Capital.
Second Avenue Land Company, Limited, The	Ottawa	75,000
Sanitary Dairy, Limited	St. Catharines	50,000
Scully and Company, Limited	Toronto	15,000
Signal Systems, Limited	Toronto	40,000
Sudbury Co-operative Creamery Company, Limited, The	Sudbury	20,000
Sudbury Copper Company, Limited, The	Toronto	1,000,000
S. S. Institute Publications, Limited	Toronto	40,000
Sandwich West Co-operative Telephone Company, Limited	Loiselleville	9,400
Slater & Company, Limited	Gravenhurst	40,000
Shell-Bar Grate Company, Limited	Toronto	40,000
T.		
Triumph Mines, Limited	Toronto	3,000,000
Tod, G. H., Company, Limited	Toronto	40,000
Tomenson, Forwood & Company, Limited	Toronto	100,000
Toronto Slipper Manufacturing Company, Limited	Toronto	40,000
Thomson-Gordon, Limited	Hamilton	40,000
Toronto Builders' Supplies, Limited	Toronto	150,000
Toronto Pure Ginger Beer Company, Limited, The	Toronto	40,000
Trimming & Embroidery Company, Limited, The	Toronto	50,000
Toronto Envelope Company, Limited	Toronto	40,000
Toronto Opticians, Limited	Toronto	40,000
Toronto Furniture Company, Limited	Toronto	500,000
Tash-Orn Mines, Limited	Toronto	3,000,000
Twin Falls Lumber Company, Limited	Toronto	200,000
Tillsonburg Foundry and Machine Company, Limited, The	Tillsonburg	25,000
Thunder Mining Company, Limited	Toronto	2,000,000
Toronto Wool Scouring Company, Limited	Toronto	40,000
U.		
United Fruit Company of Windsor, Limited	Windsor	7,000
United Liquor Company, Limited, The	Keewatin	40,000
Utility Electric Manufacturing Company, Limited, The	London	40,000
Universal Novelties, Limited	Toronto	25,000
Universal Oil Co., Limited	Toronto	40,000
V.		
Vanbosser, Limited	Toronto	40,000
Valley Securities Company, Limited, The	Toronto	100,000
W.		
Wilma Fish Co., Limited	Port Stanley	40,000
Western Sugar Refining Company, Limited	Petrolia	600,000
Walker's Restaurants, Limited	Toronto	40,000
Walton Office Equipment Company, Limited	Toronto	40,000
Windsor Casket Company, Limited	Windsor	35,000
Wood Products Company, Limited	Toronto	100,000
Wellington Building Corporation, Limited	Toronto	100,000
Western Canada Timber and Fuel Company, Limited, The	Fort Frances	40,000
Western Machinery Company, Limited, The	Port Arthur	40,000
Willys-Overland, Limited	Toronto	6,000,000
Welland Gas Company, Limited	Welland	40,000
Western Contracting Company, Limited	Port Arthur	40,000
Walker Sons, Limited	Walkerville	1,000,000
Weston Golf Club, Limited, The	Toronto	40,000
Woods, R. R., Limited	Toronto	40,000
Wilson Scale & Machinery Corporation, Limited	Toronto	100,000
Weichel, M., and Son, Limited	Elmira	100,000
Wightmans Furniture, Limited	Fort William	100,000

List of Companies incorporated for the year ending October 31st, 1916.—*Continued.*

Name.	Address.	Capital.
Waddell Preserving Company, Limited, The	Brantford	40,000
Wright Furniture Company, Limited, The	Port Arthur	40,000
Winsome Waist Company, Limited	Toronto	40,000
Westman Hardware, Limited	London	40,000
Wigle Land Corporation, Limited	Windsor	150,000
Woodsplitter, Limited	Toronto	100,000
Walker Press, Limited, The	Paris	40,000
Woodstock Re-enforced Concrete Post Company, Limited, The	Woodstock	40,000
Wright-Hargreaves Mines, Limited	Toronto	2,500,000
Wilberforce Rural Telephone Company, Limited, The	Eganville	1,500
Washed Sand & Gravel, Limited	Toronto	60,000
Wells Garage Company, Limited, The	St. Catharines	40,000
Watchman-Warder, Limited	Lindsay	40,000
Waupaca Company, Limited	Port Arthur	100,000
Walker Automobile Supply Company, Limited, The	Hamilton	40,000
West Indies Trading Association, Limited	Toronto	40,000
Westlake Brothers, Limited	Toronto	50,000
Wolftown Telephone Company, Limited, The	Cobden	1,000
Y.		
Yorkshire Clothing, Limited	Toronto	40,000
Yellow Jacket Gold Mine, Limited	Toronto	1,500,000
York Paper Box Company, Limited	Toronto	40,000
Z.		
Zion Line Telephone Association, Limited	Cobden	980

List of Corporations licensed to do business in Ontario.

Name of Corporation.	Where Incorporated.	Attorney.
A.		
Anglo-American Talc Corporation, Limited, The	New York	Thos. Carswell.
Alexalite Co., The	New York	Harry Rohleder.
Advance-Rumely Thresher Company, Inc.	New York	Thos. A. Rowan.
B.		
Brown, John S., & Sons, Limited	Gr. Britain & Ireland	W. H. Baker.
C.		
Champion Ignition Company	Michigan	Jos. W. Coatsworth.
Canadian Specialties Manufacturing Company, Limited	Dominion	J. S. Lovell.
Confederation Sand & Gravel Company, Limited, The	Dominion	John Soper.
Canadian Diamond Company, Limited, The	Quebec	G. F. Rooney.
Cudahy Packing Company, The	Maine	Andrew Dods.
Cole, C.F., Company, Limited	Dominion	C. F. Cole.
D.		
Delaware, Lackawanna and Western Railroad Company, The	Pennsylvania	A. Leadlay.
Dominion Mines and Quarries, Limited	Dominion	L. McCarthy.
Dickinson, John, & Co., Limited	Gr. Britain & Ireland	R. G. Allder.
Dominion Fire Proofing Company, Limited	Manitoba	Britton Osler.
Deloro Smelting & Refining Company, Limited	Dominion	T. Southworth.
E.		
Elgin Development, Land & Securities Company, Limited	Dominion	J. S. Lovell.
G.		
Gest, G. M., Limited	Dominion	Jas. R. L. Starr.
Gunn, Richards & Company	New York	J. M. Clark.
H.		
Hughes Electric Heating Company	Illinois	F. M. Dusenberry.
Hupp Motor Car Corporation	Virginia	E. A. Cleary.
Hudson Motor Car Company, The	Michigan	A. J. Carey.
I.		
International Metal Company	Wisconsin	Jas. Aylsworth.
J.		
Jackson, Charles & Sons, Limited	Gr. Britain & Ireland	W. H. Baker.
James McKay Company	Pennsylvania	F. W. Wegenast.

List of Corporations licensed to do business in Ontario.—*Continued.*

Name of Corporation.	Where Incorporated.	Attorney.
L.		
Lehigh Valley Railroad Company	Pennsylvania	Geo. M. Clark.
Leitch Brothers Flour Mills, Limited	Manitoba	Geo. D. Waddell.
Longyear, E. J., Company	Minnesota	W. E. Smith.
Liverpool Sheltering Homes for Destitute Children (Incorporated), The	Gr. Britain & Ireland	J. S. Rough.
Leaside Munitions Company, Limited	Dominion	Geo. C. Loveys.
Lowndes Company, Limited, The	Dominion	Chas. B. Lowndes.
M.		
Maltbie Chemical Company, The	New Jersey	C. A. Diffin.
O.		
Ottens, The Henry H., Manufacturing Company	New Jersey	W. H. Moyer.
R.		
Roberts and Schaefer Company	Illinois	Jno. D. Bissett.
S.		
Storey, W. H., & Son, Limited	Dominion	G. T. Arnold.
Saskatchewan Co-operative Elevator Company, Limited, The	Saskatchewan	Fred. R. Morris.
Seaforth Milling Company, Limited	Dominion	L. T. de Lacey.
Sudbury Nickel Refineries, Limited, The	Dominion	A. W. Fraser.
T.		
Toronto Car Advertising Company, Inc.	New York	G. S. Hodgson.
Thunder Bay Terminal Elevator Company, Limited	Dominion	J. A. Campbell.
Toronto Chemical Company, Limited	Nova Scotia	L. McCarthy.
U.		
United Wall Paper Stores Company, Limited	Dominion	R. Blakeslee.
V.		
Vitagraph-Lubin-Selig-Essanay, Inc.	New York	W. R. P. Parker.
Valmas Drug Company, Inc.	New York	D. I. Grant.
W.		
Whitlock Printing Press Manufacturing Company, The	Connecticut	F. W. Manton.
Walbridge, Aldinger Company	Michigan	A. R. Bartlet.
Western Building Company, Inc.	New York	H. J. Wright.
Western Racing Association, Limited	Dominion	J. A. McEvoy.
Y.		
Yerburgh and Hutchinson, Limited	Gr. Britain & Ireland	Geo. Peterson.

List of Corporations to whom Supplementary Licenses were Issued.

Name of Corporation.	Date.
A.	
Armour & Company (authorizing the Corporation to use capital in Ontario to the extent of $800,000)	May 10, 1916.
C.	
Commercial Acetylene Welding Company (authorizing the Corporation to exercise powers granted to Commercial Acetylene Railway, Light and Signal Company)	June 30, 1916.
E.	
Exolon Company, The (authorizing the Corporation to use capital in Ontario to the extent of $275,000)	Sept. 28, 1916.
F.	
Fidelity Trust Company of Buffalo, The (License in Mortmain)	May 5, 1916.
P.	
Public Trustee, The (License in Mortmain)	Nov. 17, 1915.

List of Companies whose Capital was Increased.

Name of Company.	From	To	Date.
A.			
Alton Foundry Company, Limited	$50,000	$100,000	Jan. 26, 1916.
Alnwick Rural Telephone Company, Limited, The	3,750	6,000	June 12, 1916.
B.			
Beaver Wood Fibre Company, Limited, The	1,000,000	2,000,000	July 15, 1916.
C.			
Continental Publishing Company, Limited	40,000	100,000	Jan. 3, 1916.
Crompton Corset Company, Limited, The	70,000	200,000	Feb. 23, 1916.
City Dairy Company, Limited	1,265,000	2,000,000	April 7, 1916.
Cummer-Dowswell, Limited	250,000	400,000	Aug. 3, 1916.
Caswell Mining Company, Limited, The	1,000,000	2,000,000	Aug. 10, 1916.
Casey Mountain Cobalt Mining and Developing Company, Limited, The	250,000	500,000	Sept. 6, 1916.
D.			
Dunnville Consolidated Telephone Company, Limited, The	60,000	80,000	Dec. 22, 1915.
Drug Trading Company, Limited	150,000	250,000	May 12, 1916.
F.			
Farrar Transportation Company, Limited	250,000	1,000,000	July 29, 1916.
H.			
Halton Telephone Company, Limited, The	10,000	20,000	March 31, 1916.
Hogg and Lyle, Limited	150,000	300,000	May 17, 1916.
J.			
Jacques Furniture Company, Limited, The	50,000	250,000	Sept. 11, 1916.
L.			
Lord & Burnham Company, Limited	100,000	200,000	Dec. 1, 1915.
Langmuir, James, & Company, Limited	25,000	75,000	Dec. 21, 1915.
Lake Shore Natural Gas Co., Limited, The	5,000	25,000	Dec. 31, 1915.
Lake Shore Mines, Limited	1,500,000	2,000,000	Sept. 14, 1916.
M.			
Mozart Piano Company, Limited	10,000	40,000	Sept. 11, 1916.
Monteith Pulp and Timber Co., Limited, The	40,000	100,000	May 8, 1916.
Major, S. J., Limited	200,000	500,000	April 13, 1916.
Masonic Hall, London, Limited	40,000	80,000	Feb. 5, 1916.
N.			
Northern Riding and Driving Association, Ltd.	1,500	25,000	Nov. 17, 1915.
Northern Riding and Driving Association, Ltd.	25,000	200,000	Feb. 12, 1916.

List of Companies whose Capital was Increased.—*Continued.*

Name of Company.	From	To	Date.
O.			
Oneida Lime Company, Limited, The.....	20,000	100,000	Nov. 15, 1915.
Orono Telephone Company, Limited, The	5,250	11,900	May 26, 1916.
O'Keefe Brewery Company of Toronto, Limited, The	2,000,000	2,500,000	July 18, 1916.
P.			
Pollard Manufacturing Company, Limited.....	50,000	150,000	Jan. 26, 1916.
Parkdale Canoe Club, Limited, The	20,000	100,000	April 19, 1916.
Pembroke Electric Light Company, Ltd., The.	150,000	250,000	July 19, 1916.
R.			
Reliance Manufacturing Company, Limited....	300,000	500,000	Aug. 29, 1916.
Relief Gas Company, Limited	40,000	80,000	July 15, 1916.
T.			
Toronto Hosiery Company, Limited	40,000	100,000	Feb. 3, 1916.
Toronto City Estates, Limited	3,000,000	5,000,000	Aug. 17, 1916.
W.			
White Reserve Mining Co., Limited, The.....	200,000	1,000,000	Sept. 17, 1916.
Westport Rural Telephone Co., Limited, The..	7,000	25,000	June 14, 1916.

List of Corporations whose Names were Changed.

From	To	Date.
A.		
Arcade Printing Co., Limited, The.	Sterling Printing and Publishing Company, Limited	Dec. 11, 1915.
Ads, Limited	R. C. Smith & Son, Limited	Feb. 28, 1916.
B.		
Barnard, H., Company, Limited...	H. Barnard Stamp & Stencil Company, Limited	Feb. 5, 1916.
Berlin Machine Works, Limited...	P. B. Yates Machine Co., Limited..	March 22, 1916.
Bilsky, M., & Son, Limited	Bilsky, Limited	May 9, 1916.
Berlin Trunk and Bag Company, Limited, The	Canada Trunk & Bag, Limited....	May 25, 1916.
Black and Muirhead, Limited	Black's Elevator, Limited	Aug. 8, 1916.
Berlin Suspender Co., Ltd., The...	The Kitchener Suspender Company, Limited	Aug. 28, 1916.
Berlin Furniture Co., Ltd., The...	The Jacques Furniture Company, Limited	Sept. 11, 1916.
Berlin Rubber Manufacturing Co., Limited, The	The Kitchener Rubber Manufacturing Company, Limited	Sept. 27, 1916.
Berlin Felt Boot Company, Limited	Kitchener Felt Boot Co., Limited..	Oct. 6, 1916.
C.		
Cochrane General Hospital, The ..	The Lady Minto Hospital at Cochrane	Dec. 20, 1915.
Canada Soaps, Limited	National Soaps, Limited	Feb. 4, 1916.
Chadwick Brass Co., Limited, The.	The Wentworth Brass Company, Limited	March 1, 1916.
Canadian Hardwoods, Limited.....	Dominion Hardwoods, Limited....	March 11, 1916.
Canada Cereal Company, Limited.	Cereal Mills, Limited	June 23, 1916.
Cereal Mills, Limited	Colonial Cereal Company, Limited.	Aug. 3, 1916.
D.		
Dominion Register Co., Limited...	McCaskey Systems, Limited	July 6, 1916.
F.		
Flor de Canada Cigar Co., Limited.	Canada Cigar and Tobacco Company, Limited	March 13, 1916.
Fretz, Limited	Harvest Company, Limited	March 14, 1916.
Foster Company of Richard's Landing, Limited, The	The Armstrong-Montgomery Company, Limited	March 17, 1916.
G.		
Guy, F. A., Grain Co., Limited....	Merchants Grain Company, Limited	Sept. 5, 1916.
German Printing and Publishing Company of Berlin, Limited, The	The News Record, Limited	March 18, 1916.
Givin, J. M., Limited	Broadview Wine and Spirit Company, Limited	Dec. 11, 1915.
Gore Bay Riding and Driving Park Association, Limited, The	Northern Riding and Driving Association, Limited	Nov. 17, 1915.
H.		
Health Extension Association of Canada	Health Extension Association of North America	April 18, 1916.
Harris Mines, Limited	Lorrain Consolidated Mines, Ltd...	May 5, 1916.
Heaton and Meir, Limited	Meir and Linden, Limited	June 7, 1916.

List of Corporations whose Names were Changed.—*Continued.*

		Date.
K.		
Kuhn-Merrill, Limited	The Dadson-Merrill Press, Limited.	May 4, 1916.
K. & S. Auto Tire Co., Limited	K. & S. Canadian Tire Co., Limited	Dec. 23, 1915.
L.		
Lakefield Canoe, Building & Manufacturing Company, Limited, The	Lakefield Canoe Company, Limited	Feb. 8, 1916.
Laurentian Consolidated Mines, Limited	Rognon Gold Mines, Limited	May 2, 1916.
M.		
Massey Estates, Limited	A. L. Massey & Co., Limited	May 2, 1916.
Mineral Springs, Limited, The	York Springs, Limited	March 22, 1916.
N.		
Northern Trap Rock, Limited	Northern Chemical Co., Limited	March 6, 1916.
Near, E. W., Limited	Ridgeway Planing Mill, Limited	April 12, 1916.
Noel-MacKay Lumber Company, Limited, The	P. J. Noel Lumber Company, Limited	May 15, 1916.
O.		
Ontario Groceries, Limited	Ontario Grocers, Limited	Jan. 10, 1916.
Oberholtzer, The G. V. Company, Limited	Hydro City Shoe Manufacturers, Limited	May 19, 1916.
R.		
Reo Sales Company of Toronto, Limited	Reo Motor Sales Company of Toronto, Limited	Nov. 25, 1915.
S.		
Sarnia Gas and Electric Light Company, Limited, The	Sarnia Gas Company, Limited, The	June 16, 1916.
Schrader Cigar Company, Limited, The	Chapman Dixon Tobacco Company, Limited	Nov. 7, 1916.
Snedicor Hathaway Company, Limited, The	Tillsonburg Shoe Company, Ltd., The	Dec. 15, 1915.
W.		
Williams, Greene and Rome Company of Berlin, Limited, The	The Williams, Greene & Rome Company, Limited	Oct. 17, 1916.
Weaver, F. P., Coal Co., Limited	Weaver Coal Company, Limited	Oct. 17, 1916.
Webster-Harvey, Limited	Webster Fuel Company, Limited	Oct. 26, 1916.

List of Corporations whose Powers were Extended.

Name.	Date.
B.	
Blind River Boom and Slide Company (Limited) The (extending the period of its existence)	May 26, 1916.
C.	
Canadian General Securities Co., Limited (providing for quorum)	June 29, 1916.
F.	
Fox Brothers and Company, Limited (extending its powers)	May 27, 1916.
G.	
Globe Graphite Mining and Refining Company, Limited, The (authorizing payment of commission, meetings out of the Province, etc.)	Sept. 27, 1916.
Globe Graphite Mining and Refining Company, Limited, The (relieving the Company from the provisions of sub-sections (1) and (2) of Section 119 of the Act)	Oct. 5, 1916.
H.	
Harris Development & Exploration Syndicate, Limited (re-dividing its capital)	Nov. 11, 1915.
Harris Development & Exploration Syndicate, Limited (re-dividing its capital)	Dec. 17, 1915.
Hogg and Lytle, Limited (changing its head office)	May 17, 1916.
Huntsville and Lake of Bays Telephone Company, Limited, The (reducing the number of its directors)	July 6, 1916.
I.	
International Varnish Company, Limited (authorizing meetings out of the Province and fixing quorum)	Jan. 20, 1916.
K.	
Kittinger Gas Company, Limited (relieving the Company from the provisions of sub-sections (1) and (2) of Section 119 of the Act).	March 31, 1916.
Knight Brothers Company, Limited, The (extending its powers)	Oct. 5, 1916.
L.	
Lord & Burnham Company, Limited (authorizing meetings out of the Province, and changing its head office)	Dec. 1, 1915.
Lands Corporation of Ontario, Limited, The (confirming by-law No. 5 of the Corporation)	Nov. 29, 1915.
Lorrain Consolidated Mines, Limited (relieving the Company from the provisions of sub-sections (1) and (2) of Section 119 of the Act).	Sept. 29, 1916.
M.	
Mason, Geo. M., Limited (extending its powers)	Dec. 20, 1915.
Major, S. J., Limited (extending its powers)	April 13, 1916.
Monteith Pulp and Timber Company, Limited, The (converting common into preference shares)	May 8, 1916.

List of Corporations whose Powers were Extended.—*Continued.*

Name.	Date.
N.	
National Mines, Limited (relieving the Company from the provisions of sub-sections (1) and (2) of Section 119 of The Ontario Companies Act)	July 6, 1916.
O.	
Ontario Sunday School Association, The (extending its powers)	Dec. 30, 1915.
Orono Telephone Company, Limited, The (extending its powers)	May 26, 1916.
P.	
Pittsburgh Coal Company, Limited (authorizing the Company to keep books outside of the Province)	March 31, 1916.
R.	
Relief Gas Company, Limited (extending its powers)	March 21, 1916.
S.	
Spanish River Pulp and Paper Mills, Limited, The (authorizing the holding of meetings outside of the Province)	Oct. 18, 1916.
U.	
United Gas Companies, Limited, The (authorizing meetings out of the Province)	Sept. 6, 1916.
United Gas Companies, Limited, The (relieving the Company from the provisions of sub-sections (1) and (2) of the Act)	Oct. 5, 1916.
W.	
West End Christian Temperance Society, The (authorizing investment of moneys)	Nov. 29, 1915.
Wilson, John T., Limited (increasing the number of its directors)	May 16, 1916.
Wilson, John T., Limited (extending its powers)	June 16, 1916.
Westport Rural Telephone Company, Limited, The (extending its powers)	June 14, 1916.

List of Corporations Without Share Capital.

Name of Corporation.	Place.
A.	
Association for Psychical Research, The	Toronto.
B.	
Bishop Strachan School, The	Toronto.
Brotherhood of Stationary Engineers of Ottawa, The	Ottawa.
British Madrigal Society of Toronto, The	Toronto.
British Empire Union of Canada, The	Toronto.
Beta Delta Pi	Toronto.
C.	
Canadian Serbian Relief Committee	Toronto.
City Club of Toronto	Toronto.
Canadian Indians	Toronto.
Camp Louise Club, The	Picton.
Canadian Defence League, The	Toronto.
Congregation Anshei Libavich	Toronto.
E.	
Elmwood Club	London.
Eastbourne Golf Club, The	Eastbourne.
Employers' Association of Hamilton	Hamilton.
Essex Lawn Bowling and Tennis Club, The	Essex.
F.	
First Hebrew Roumanian Congregation Adath Israel, The	Toronto.
G.	
Garden of Canada Co-operative Association	Kingsville.
H.	
Haldimand Law Association, The	Cayuga.
Humewood House Association	Toronto.
J.	
Junior Council of Jewish Women of Toronto	Toronto.
K.	
Kingston Yacht Club	Kingston.
L.	
Lily Cheese Manufacturing Association, The	Newington.
Lambton County Co-operative Association	Petrolia.
M.	
Marlborough Club, The	Peterborough.
Manitoulin Co-operative Association, The	Gore Bay.
Members Club	Fort William.
Modern Spiritualists' Church	Toronto.

List of Corporations Without Share Capital.—*Continued.*

Name of Corporation.	Place.
N.	
National League for the Prevention of Spinal Curvature, The	Toronto.
O.	
Ottawa Symphony Orchestra	Ottawa.
Ontario Equal Franchise Association	Toronto.
P.	
Pelee Island Co-operative Association, The	Pelee Island.
Phœnix Club of Toronto, The	Toronto.
Pythian Hall of Ottawa	Ottawa.
S.	
Sining Charitable Association	Toronto.
Shaw Cemetery Company, The	Kent Bridge.
Servites de Marie D'Ottawa, Les	Ottawa.
T.	
Toronto Bible College	Toronto.
Toronto Painters and Decorators' Association	Toronto.
U.	
United Hebrew Association of Hamilton	Hamilton.
W.	
Walkerville Hunt Club	Walkerville.
Whitefish Valley Co-operative Cheese and Butter Association	Hymers.
Woman's Exchange	Hamilton.

List of Companies whose Capital has been Decreased.

	From	To	Date.
*Abell, The John, Engine and Machine Works Company, Limited			Dec. 23, 1915.
Alberta Central Land Corporation, Limited, The.	$750,000	$398,000	Nov. 30, 1915.
K.			
Knight Brothers Company, Limited	500,000	450,000	Oct. 5, 1916.
N.			
Nipissing Wine and Spirit Company, Limited, The	100,000	50,000	April 11, 1916.
T.			
Turner, James, & Co., Limited	150,000	100,000	July 5, 1916.

* Cancelling 1,250 unissued shares and reducing par value of issued shares from $100 each to $6 each.

List of Corporations whose Charters were Surrendered.

Name of Corporation.	Date.
A.	
Avern Pardoe & Company, Limited	April 17, 1916.
B.	
Blenheim and Harwich Oil Company, Limited	March 7, 1916.
Butwell Brick Company, Limited, The	April 12, 1916.
Bonesteel and Handford, Limited	May 23, 1916.
Brockville Peat and Power Company, Limited, The	May 26, 1916.
C.	
Canadian Cartridge Company, Limited	Nov. 3, 1915.
Canadian Cartridge Company, Limited	March 7, 1916.
Canadian Mining and Exploration Company, Limited	March 20, 1916.
Canadian Aluminum Goods Supply Company, Limited	March 30, 1916.
Crescent Dresses, Limited	Aug. 21, 1916.
D.	
Dominion Carbonic Company, Limited	Aug. 17, 1916.
Dalley, The F. F., Co., of Hamilton, Limited	Sept. 23, 1916.
Dietzgen, Eugene, Co., of Ontario, Limited	Oct. 12, 1916.
E.	
Enterprise Gas Company, Limited, The	Jan. 28, 1916.
Erie Natural Gas Company, Limited, The	Jan. 29, 1916.
F.	
Flavelle Milling Company, Limited, The	June 7, 1916.
G.	
Gatlin Institute Company, Limited, The	March 23, 1916.
Gray, Young and Sparling Company of Ontario, Limited, The	Nov. 17, 1915.
H.	
Hagersville Light and Fuel Company, Limited	July 20, 1916.
L.	
London Land Company, Limited, The	Feb. 4, 1916.
Lambeth Union Hall Company, Limited, The	March 14, 1916.
M.	
Meriden Britannia Company, Limited	Dec. 27, 1915.
McCready, The R. A., Company of Toronto, Limited	Jan. 7, 1916.
Michigan Cobalt Mines, Limited	Feb. 21, 1916.
McLean, Szeliski and Stone, Limited	Sept. 13, 1916.
N.	
Norfolk Gas Company, Limited, The	Jan. 28, 1916.

List of Corporations whose Charters were Surrendered.—*Continued.*

Name of Corporation.	Date.
O.	
Ottawa Citizen Company, Limited, The	June 26, 1916.
P.	
Producers Natural Gas Company, Limited, The	Jan. 27, 1916.
Port Rowan Natural Gas Company, Limited, The	Jan. 28, 1916.
S.	
St. Mary's Portland Cement Company, Limited	Dec. 9, 1915.
St. Mary's, Kirkton and Exeter Telephone Company, Limited	Dec. 29, 1915.
Spanish River Pulp and Paper Company, Limited	Jan. 8, 1916.
Sebringville Cheese and Butter Company, Limited, The	March 31, 1916.
Sheppard Publishing Company, Limited, The	June 21, 1916.
T.	
Trenton Cooperage Mills, Limited	Jan. 3, 1916.
Thamesville Canning Company, Limited, The	May 9, 1916.
W.	
Waverley Realty Company, Limited	Jan. 7, 1916.
Waines and Root Gas Company, Limited, The	Jan. 27, 1916.

Proclamations Gazetted.

Name.	Date.
Re Appointing Sunday, 2nd January, a day of prayer	Jan. 1, 1916.
Re An Act relating to the Avenues and Approaches to Queen's Park, Toronto	Feb. 5, 1916.
Re Anniversary of Declaration of War, Second	June 24, July 1, 8, 15, 22, 29, 1916.
Re An Act respecting Public Roads and Highways in Ontario	Jan. 15, 1916.
Re An Act respecting the City of Ottawa	July 22, 1916.
Re Appointment of C. A. Masten Commissioner *re* Insurance Companies	Aug. 26, 1916.
Re British Red Cross Day, 19th October, 1916	Sept. 23, 30, 1916.
Re City of Berlin, change of name to "Kitchener"	Aug. 26, 1916.
Re Gifts of property made by Oscar Earle McGaw	Aug. 26, 1916.
Re Legislative Assembly of Ontario to Convene 29th February	Feb. 5, 12, 19, 26, 1916.
Re Murder of Rocco Scolzo on 29th August, 1916, at the Town of Steelton	Sept. 16, 1916.
Re Thanksgiving Day, 9th October, 1916	Sept. 16, 23, 1916.

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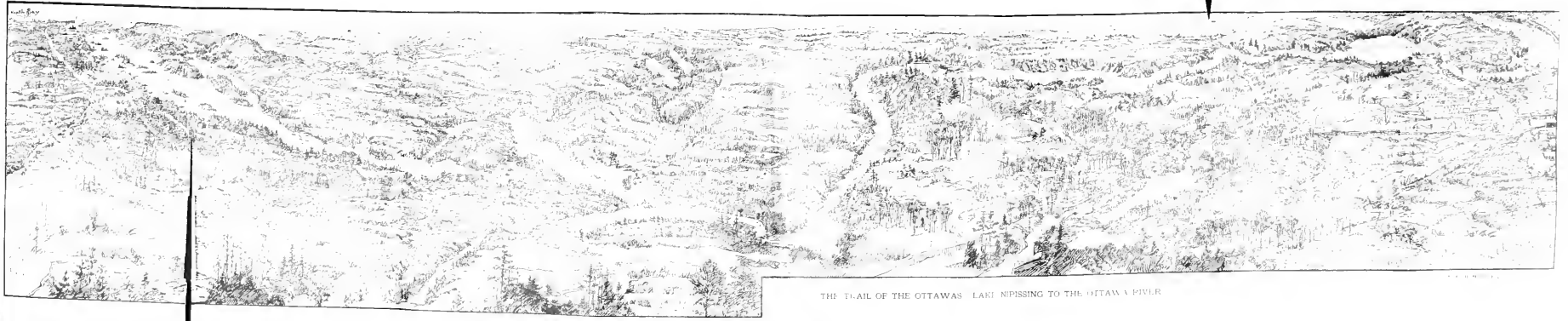

THE TRAIL OF THE OTTAWAS · LAKE NIPISSING TO THE OTTAWA RIVER

TWENTY-EIGHTH ANNUAL

Archæological Report

1916

By DR. R. B. ORR

BEING PART OF

Appendix to the Report of the Minister of Education, Ontario

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TORONTO

PRESENTATION

To the Honourable Colonel R. A. Pyne, M.D., LL.D., M.P.P.,

Minister of Education, Ontario.

Sir,—I have the honour to submit herewith the Twenty-eighth Annual Report of the Ontario Provincial Museum. Seven hundred and six Indian artifacts have been added to the Archæological collections, and large additions have been made to the Biological Section. In this department there is pressing need for increased space in which to display the rapidly growing collection of specimens of our native fauna and to facilitate the study of natural history both from the economic and scientific sides.

I have the honour to be,

Sir,

Your obedient servant,

Rowland B. Orr,

Director.

Toronto, Dec. 30th, 1916.

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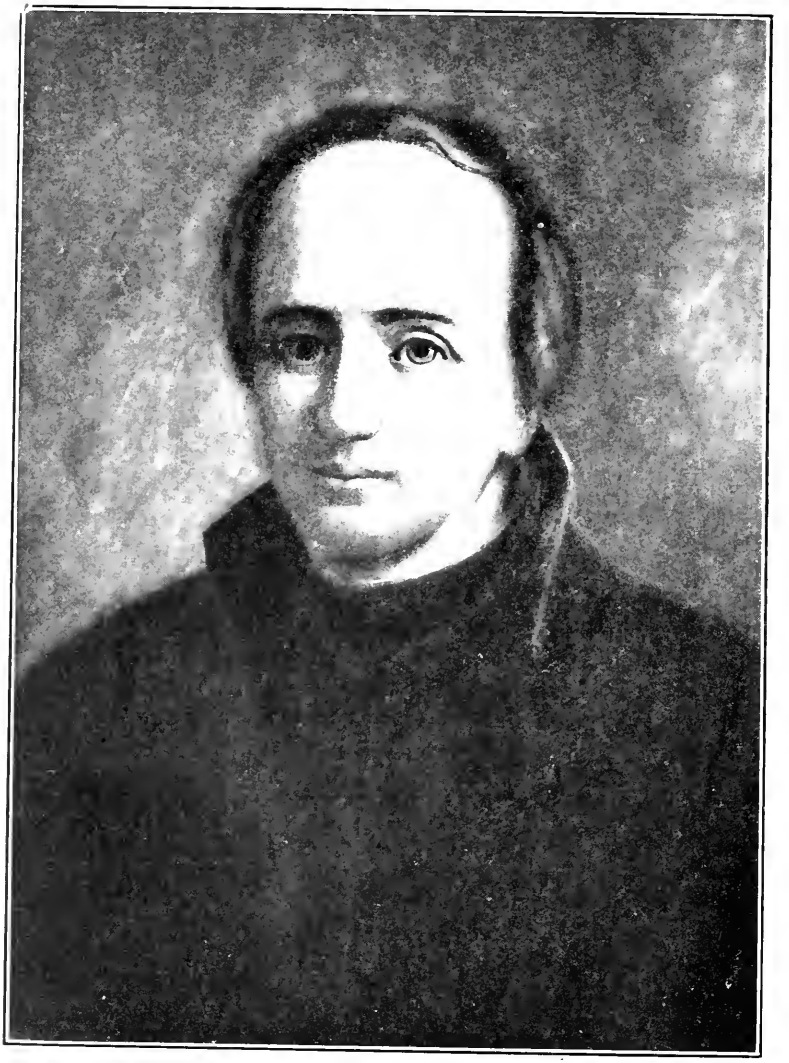
To the student of Indian Archaeology, the great highway of the Ottawa will always be a subject of absorbing interest. As yet, it is almost a virgin field of inquiry, as far as any systematic effort has been made to exploit it. As yet, there are vast stores of information along this old waterway which await the magic touch of scientific investigation to be turned into romance chapters of Canadian history. Sooner or later we must appreciate these potential opportunities for the collection of data that may solve many important ethnic problems which have been transmitted to us from the dim twilight of prehistoric times, and are, as yet, only presented to us in the will-o'-the-wispish light of tradition. The Ottawa River may yet furnish us with clues to the elucidation of much that is problematical in regard to areas of occupation, migrations and dispersions of some of our great native races, who were leading actors in many of the tragic wildnerness dramas that were played out in Canada before and after European contact.

The early Jesuit missionaries have left us, in their Relations, a priceless record of Algonquin and Huron sociology, as well as an invaluable basis for the study of such of the Indian tribes of Canada as came within the sphere of their activities. As those gentle and lovable pioneers of the Cross were among the first Europeans to come in contact with these red children of the forest, they enjoyed exceptional opportunities for observing their habits of thought and action ere their primitive folk-lore and traditions had been modified by the cradle stories of the pale-faces.—"The Ottawa Valley," by T. W. E. Sowter.



Jacque marquette

FAC-SIMILE OF THE SIGNATURE OF
FATHER MARQUETTE.

TRADE ROUTE OF HURONS AND ALGONQUINS

Before entering upon a historical sketch of the Algonquin tribe, known to us as Ottawas, a brief description of the trade route and rivers leading to the St. Lawrence River from Georgian Bay, which were followed by the Algonquin and Huron traders, may be instructive and interesting. Long before Champlain's visit to Huronia (1615), and long before the ruthless conquest of the Hurons by the Iroquois (1649), a large and profitable trade had been established in tanned and untanned skins, in rugs, flint arrow and spear tips, hemp, mats, tobacco and fresh-water shells, by the Hurons and the Algonquins east of Lake Superior with their kinsmen of the lower Ottawa and the St. Lawrence River.*

French River.

Down this picturesque river from Lake Nipissing came in early days Canadian and French dauntless explorers and devout missionaries, who explored the land, visited the tribes of half a continent, penetrated the region of the Great Lakes and carried the Cross and the fleur-de-lis from the Atlantic to the Mississippi. Among these heroic men were the Franciscan priest, Joseph Le Caron, first of white men and first of missionaries to penetrate the Huron wilderness; Samuel de Champlain; Etienne Brulè, Champlain's interpreter and daring bush-ranger; Gabriel Sagard, the historian of early Canada and companion of Le Caron; Jean de Brebeuf, the saintly missionary and martyr; Jean Nicolet, the explorer and first of civilized men to enter Lake Michigan and penetrate the Wisconsin forests; Pierre Esprit Radisson and Medard Chouart des Groseilliers, traders and fearless explorers; Joliet and Marquette, the discoverers of the Mississippi; and the brave and saintly missionaries Lalemant, Jogues, Garnier, Daniel and Chaumonot, so intimately identified with the earliest annals of our country.

In those early days French River flowed through a boundless wilderness, through luxuriant and towering maple, beech and hickory, growing side by side with dwarfed pine and hemlock, with fir, birch and spruce. Flowing west from

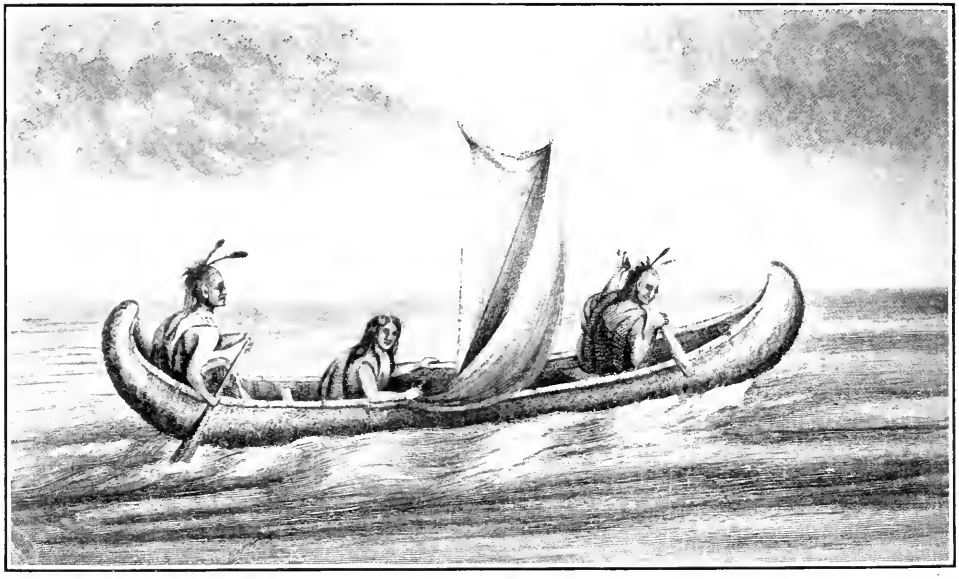
*The shells were reduced by cutting and friction, to red, white or black beads, which were sewn into fawn leather, forming wampum belts, memory tablets, collars, bracelets and ornamental sashes, five or six inches wide. The beads were worn also as ornamental pendants from the ears and nose, and for personal decorations, just as we wear jewellery.

Hemp was woven into fish nets and bundle twine. Sun-flower oil was applied to the hair and to the body as an emollient.

Flints were obtained in trade by the Hurons from the Attiwandarons or Neutrals, who controlled the chert quarries near Abino, Lake Erie.

Lake Nipissing the river is fifty-five miles in length, and for beauty and variety of scenery is unsurpassed by any stream in Western Ontario. Its many rushing currents and numerous rapids offer serious opposition to an ascent from its outlet on Georgian Bay.

It was here the great trade-route of the Algonquins, Ottawas and Hurons of the north and north-western regions began where the traders entered French River at one of its seven outlets into Georgian Bay. Fifty miles, chiefly of rushing rapids and tumbling falls, must be overcome before they reached the wide waters of Lake Nipissing. With a flotilla of canoes, heavily laden with wares, they paddled or poled their devious way, sometimes under bold rock-bound walls on both sides; stemming or portaging rapids, climbing cliff and crag to avoid falls and rapids: on through long river stretches, threading their course through a maze of islands, past inlets that looked like Norwegian fjords; and usually by noon of the fifth day they glided out into the pleasant shallows of Lake Nipissing. Eighteen-Mile Island, which they



Ottawa Canoe, Lake Nipissing.

passed near the head waters of the French River, with its wild and rugged shores, has given birth to a legend. "Half-way down the reach on the north side is a great obelisk-like rock, that much resembles a huge owl, and, in the river, are three small rock islands. Their existence is thus accounted for: Once, long ago, a great hunter of fabulous skill gave chase to a huge owl and three owlets. These he pursued night and day till, in desperation, her little ones becoming exhausted, she threw them into the water, where they instantly became rock peaks, while the mother perched on the bank and turned to stone, still guarding her brood."

Writing of this water-way as it was in his day, 1686, La Hontan says: "In going up this river (French River) there are five cataracts, which oblige us to turn out and carry all our baggage for thirty, fifty and one hundred paces. Having passed the river, we entered the Lake of the Nepecerinis, from which we are forced to transport our canoes and baggage two leagues overland to another river (Mattawa) which has six or seven waterfalls that we shoot."

Lake Nipissing.

One of the most fascinating of our inland lakes is Nipissing, named after the Algonquin tribe dwelling around its shores early in the 17th century. The lake is 658 feet above the level of the sea, is 55 miles long, 20 at its greatest width, and lies midway between Georgian Bay and the Ottawa River. It is sown with many attractive islands and islets, and receives several streams, the largest of which is Sturgeon River. Its shores are, in places, wildly rugged and bold and clothed in a growth of stunted timber. When the Nipissing roamed its forests the lake was rich in trout, mascalonge, sturgeon and rock bass.

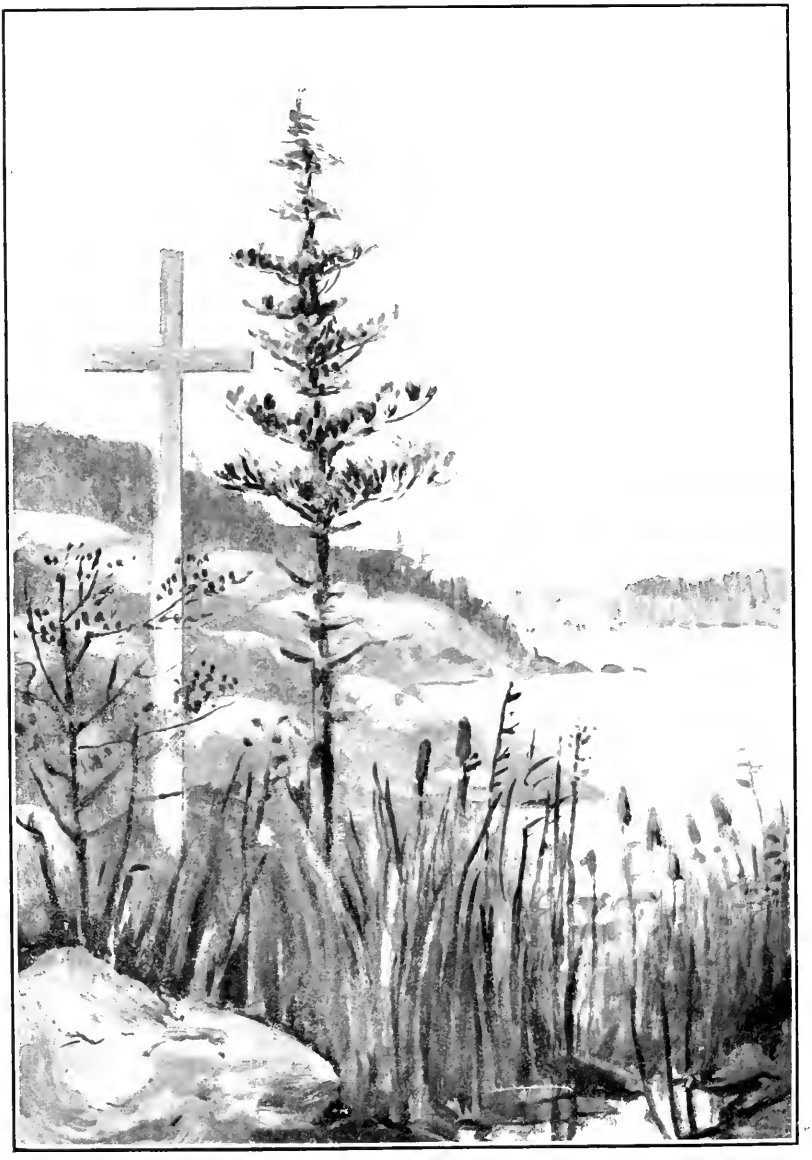
Mattawa Indian Trail.

In order that I might ascertain, by personal examination, the condition of the old trails and water-routes of Indian and early French trade in what is now Northern Ontario, and the face of the land as it exists to-day, I started from Toronto, early in October, 1916, and in a few days began my explorations.

Arriving at North Bay, I went down the North Bay and Trout Lake Road, to the head of Trout Lake, on which is situated the village of Trout Mills, a station on the T. & N.O. railway. At the head of the lake, a short distance from the post-office, is a saw-mill, which occupies the site of the original landing-place and terminus of the Indian water route up the lake. Westward, about two and a half miles from this camping ground, stands the C.P.R. station in North Bay. This was one of the routes used by the early traders more frequently than any other; for, a few miles west of North Bay were the settlements of the Nipissings, whom Champlain visited on his first trip. On the south shore of Trout Lake we explored another historic spot, mentioned by some as the first landing-place of Champlain. It is known as Dugas Bay, and the lake adjacent to it as Brandy Lake. This Bay extends a short distance inland and is protected by lofty precipices from the west winds, and makes one of the finest harbors in the Trout Lake region. On the shores of the lake, the late Mrs. Dugas erected a wooden cross to commemorate the landing-place of Champlain and his Franciscan companion. From this portage the Indians went southward four or five miles to near Cliffe Station on the C.P.R. and thence westward by Rivière des Vases into Lake Nipissing, some few miles south of North Bay.

The watershed between the Ottawa and Georgian Bay is between Nipissing and Trout Lakes, and is not very pronounced; for the North Bay trail is a fairly level one. The waters of Trout Lake are only six feet higher than those of Lake Nipissing. The route from these landing-places of the early tribes extends down the central part of Trout Lake, which is a large, clear, all-shadowing body of water. A great many lesser trails start from its shores, but nearly always towards the south. The north shore is very rocky and inaccessible, with mountains extending as far as the eye can see. The lake itself, with the exception of a few cottages to be found here and there on the southern side, is still the same primitive body of water that reflected the images of Le Caron, Champlain, and the French voyageurs who traversed it in the early part of the 17th century. Here our guide suggested that we send our boats on and that we go into Miles Bay and portage a few yards into Four Miles Bay, a part of Trout Lake where Echo reigns supreme. The atmospheric conditions were favourable and Echo in good humour. A single word, a shout or a musical note, would be repeated eight times distinctly, and a short sentence three

or four times if spoken rapidly and in a high key. As we descend these waters and come to the eastern portion of the lake it narrows to a mere channel. Trout Lake is the head-waters of the Mattawa River and, with the chain of lakes south-eastward, may be said to be a portion of that river. Passing through the narrow



Cross on Dugas Bay, Trout Lake.

channel at the southern end of the lake, we encounter, running out from its northern shore, a ridge of stones forming what is called the Stepping Stones, which extends almost across the lake. When it is seen in the distance, one would imagine that this formation was built by the hands of a race of giants.

A little distance beyond this is the entrance from Trout Lake into Turtle Lake. The narrows here at times have been converted into rapids; but to-day, though the channel is very narrow, it is deep enough for the passage of canoes, small boats, and even gasoline launches. From this the course passes into the northern arm of Turtle Lake for about three and a half miles to its eastern extremity. Here we have to punt Mud River and then cross by a short portage into Pine Lake. Turtle Lake is dotted with islands of picturesque beauty, and its shore-lines are rich with forest vegetation. In the fall of the year the russet, purple, saffron and variegated coloring of the trees is beyond description. From the north shore of Turtle Lake flows the Mattawa River, which was not used to any great extent as a trade route by the Indians coming up from the St. Lawrence.

The portage from Turtle to Pine Lake is a quarter of a mile in length and is easily made. The lake itself is a small body of water extending eastward from this portage and there are numerous islands. On the east side, a millionaire American has built a cottage on the site of the old camping ground of the early Nipissings. This place still shows evidence of its early occupation: pottery, and flint artifacts and other material of Indian manufacture have been found there.

The origin of Pine Lake is of interest. According to an Indian legend there dwelt a great hunter, who had camped with his family near the owl-like rock of Eighteen-Mile Island, in the French River. A monster beaver, as shrewd and wicked as he was powerful, stole the hunter's child and retreated to his dam. The infant's piteous cries proclaimed its whereabouts, and the frantic father began an attack that breached the dam, as the slide authenticates, but not before the wily beaver managed to escape with the baby and take up a fresh stand behind a curious rock outcrop, some fifteen miles up-river, in the Five-mile rapids. Hither the father pursued and again dislodged the beaver, which this time abandoned the child and beat a hasty retreat across Lake Nipissing and through Trout Lake to a rocky hill between Turtle and Talon Lakes. There the beaver was killed with great rejoicing, and the whole tribe gathered to feast upon his carcass, but, cut up and in the boiling pot, the tail still splashed the water into foam, finally upsetting it, forming Pine Lake, which sure enough is ten feet above all its surrounding neighbours. No squaw to this day lets the beaver meat boil over.

The portage between Pine Lake and Lake Talon is somewhat over a quarter of a mile long and is really a good road. There are many evidences of use by the prehistoric races. In recent years it has become the route for travelling south to the C.P.R. when the lakes are frozen, and also for the cartage of timber and logs from the neighbouring townships. On the north-east shore of Pine Lake is a beautiful beach, still showing signs of Indian occupation From this portage on McCool Bay we went directly across Talon Lake to Black Bay in the north-west angle, and visited the old Indian camp-ground situated on its shore. From this camp-ground, extending north-east in the township of Phelps and into the township of Olrig, we ascended a three-mile-and-a-half portage, rising six or seven hundred feet in height, which brought us to Lake Cahill. Here we found boats, and, after crossing Lake Cahill, we portaged two miles and a half to Lake Perron. On the other shore of Lake Perron we again followed the Indian trail and made a portage to Clear Lake; then across the lake we reached the trail leading to the Antoine and Ottawa Rivers.

This trail also continues southward to the Mattawa River, near Rutherglen, and from its appearance and situation it was evidently the route in the early Indian days for hunting and fishing trips into that northern section. These lakes were, doubtless, often visited by the Indians for fishing purposes. In all of them speckled

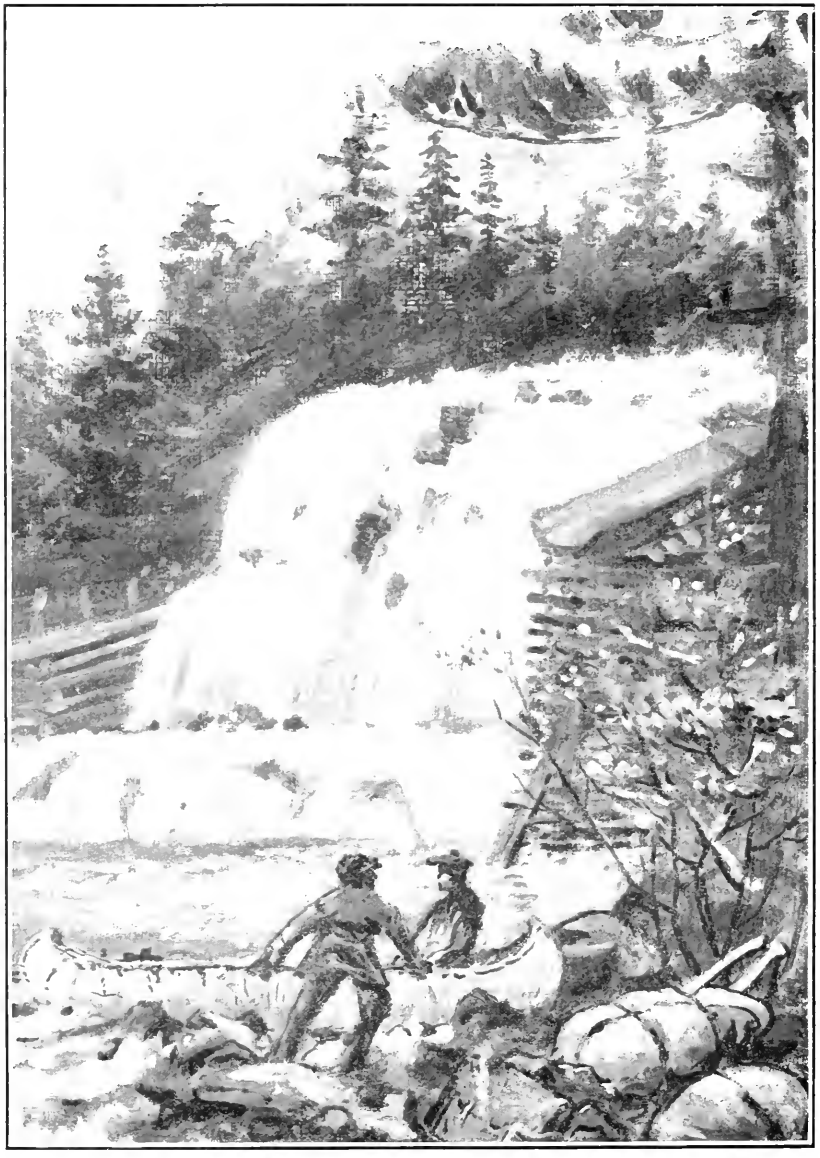
A Portage on the Mattawa.

trout are very plentiful, and in Clear Lake they attain, in many cases, a weight of three and a half pounds; consequently, few better speckled trout lakes are to be found in any part of Ontario outside of the Nipigon district. None of them are large bodies of water: Cahill, probably covers four hundred acres; Perron, about one hundred and seventy-five; and Clear Lake, one hundred. They are surrounded by a heavy growth of timber, the maple being particularly large. This district is in the maple ridge, which extends from the Quebec boundary to Widdifield township, and is eight or ten miles in width. The undergrowth of the forest is very dense and is entirely of young maple.

Returning to Talon Lake, we went southward and again followed the old route down Lake Talon to its southern end, when we came to what is the junction of Lake Kai-bus-kong and Talon Lake. From here the Mattawa River runs a rapid course. Opposite the north side at the junction of the two lakes is an extensive sand-beach, and even to-day arrow-heads and other artifacts were found in this Indian village and camping ground. Here the other Mattawa trail begins; but, instead of going northward from Lake Kai-bus-kong, it takes the southern course to Lake Nasbonsing, passing Bonfield station on the C.P.R. It runs westward through Lake Nasbonsing, and the portage road continues west until it reaches the Wistiwasing River. Running south-west through a series of portages, rivers and lakes, it strikes South-East Bay, the most easterly point of Lake Nipissing. Champlain states in his "Voyages and Explorations" that "by pursuing our route by land, leaving the river of the Algonquins (Ottawa) we pass several lakes, where the savages carry their canoes, until we entered the lake of the Nipissings, in latitude $46\frac{1}{4}°$." Here he refers to his arrival at the cabins of the savages. The nation of the Nipissings was then situated west of where North Bay's C.P.R. station now stands. Thus, from his description he was just as likely to have taken the Trout Lake crossing and to have landed at the most westerly end of Trout Lake, where he would pass a number of lakes and arrive at the shore of Lake Nipissing, a short distance west of where North Bay now stands. From Kai-bus-Kong Channel we pass down into the Mattawa River, a very pretty stretch of water, which in a short time brings us to Talon Falls. These falls are 43 feet high and the water boils over enormous boulders. Like all the falls on the Mattawa they are somewhat disfigured by the chutes used for driving logs in the old days of timbering in these waters. Below the falls the stream narrows down and dashes between shores edged with huge Laurentian rocks. The portage at these falls is on the right side, and a very rocky portage it is. There are many indications that it has been used for a great length of time. A short distance below the falls, after passing through a level reach of water which runs between precipitous cliffs, we arrive at Lake Pimisi, a fine sheet of water stretching away southward. We followed its north shore and came to its outlet, where are rapids which we portaged to the right, but we sent our canoes down by our Indian guides. After leaving these rapids we find the river again extending to a width of nearly three-quarters of a mile, and we arrive in a short time at a series of portages. These rapids, however, could be run very easily.

The portage made at La Fleur Rapids is on the north side, and, like nearly all the other portages on the Mattawa River, is very easily discerned. Immediately below this are other small rapids hardly worth mentioning. The next rapid is portaged on the north side and has an old camping site near by, evidently used in the days of the early voyageurs, as well as by their Indian predecessors. Then we continue to the north-eastern bend in the river and soon come to the Paresseux Falls, where the river resumes its eastern course. They are very impressive, but somewhat spoiled by the lumbermen's slides. Leaping down thirty-four feet, the

river rolls over numerous boulders, churning the waters white. These falls have to be portaged on the left side over very rocky and rough ground. The scenery down the river to the Falls is unsurpassed anywhere in our Province, and except for the absence of many of the large trees its wild and majestic beauty is just as



Paresseux Falls, Mattawa River.

it met the eyes of Champlain on his first trip up this river three hundred years ago. A short distance below the falls, on the left-hand side of the river, is a cave ten or twelve feet above water-level. This cave is twenty-five feet long by twelve feet wide, and probably has been the resting-place or hiding-place of many an Indian

Dog Team Crossing Trout Lake.

brave during war-time days on the Mattawa. As in the days of the early voyageur, the river is still full of sturgeon, bass and cat-fish; and I may mention that the cat-fish pass up the river no farther than these falls. For a few miles before coming to Lake Plain Chant, there is a number of rapids, most of which are easily run by canoes. This lake is opposite Eau Claire Station on the C.P.R. It is a beautiful stretch of clear water surrounded by lofty granite mountains. After passing along the river we come to the last falls, a few miles east of the Ottawa River. They furnish the power for the electric plant that supplies the town of Mattawa. This is the last portage; it is on the right side of the river and passes through the grounds belonging to the engineer of the power plant. Here the river again widens out and soon in the distance are seen the houses of Mattawa town. Then the beautiful Catholic cathedral comes into full view, and we arrive at the wide expanse of the rolling waters of the Ottawa River.

These water-ways are all so good that one would expect they would be used more frequently by tourists. On our trip down, with the exception of some parties we met at Rutherglen, we saw very few traces of civilization; in fact, from Trout Lake to the Ottawa River it is much the same to-day as it was three hundred years ago. Often we were miles from a settler. At night the imagination was quickened by the howl of a wolf and of the wildcat, or the stealthy tread of some prowling animal. The old Indian trails running north and south are still often to be found and recognized, but many of them have been wiped out by fire and the growth of timber. It is well known that the early coureurs de bois and traders of a later date made use of Indian routes almost entirely. The canoe route from North Bay can be made to Mattawa in two days. Leaving North Bay in the morning, one may arrive at the foot of Lake Talon that evening; starting from Rutherglen, at the east end of Lake Talon, early the next morning we reached Mattawa before sundown. The camping grounds and village sites are not very numerous. The traces of them, however, are visible here and there; and reward the searcher after relics with some pottery and arrow-heads, but with very little of much value. The camping site at the south-east end of Trout Lake, known as Dugas Bay, still retains its old fire-place. Pottery has been found there and pieces of French china.

Rivière Creuse—Deep River.

This beautiful river—actually the Ottawa—owes its name to its great depth in many places. It flows between the Mattawa and Les Deux Joachims. The river is wide and deep; it is 143 miles from Ottawa city and has a length of twenty-eight miles of calm and seemingly stationary water. The land lying on its south has the appearance of a high and level plateau well wooded with birch and red pine. The northern shore-line, while barren and repellant to the eye, is bold and mountainous in its configuration, and its boulders of syenite rise to a conspicuous height.

The Ottawa.

This most important tributary of the St. Lawrence River rises about 200 miles north of the City of Ottawa. It flows westward into Lake Timiskaming, and after leaving the lake turns partially to the south and forms for many miles the boundary line between the Provinces of Quebec and Ontario. Passing the city of Ottawa the course of the river is eastward: it enters the St. Lawrence near the Island of Montreal. Its total length is estimated to be 625 miles, 250 of which are navigable for

steamers of light draught. Its principal feeders are the Mattawa, Madawaska, Rideau, Gatineau, and Rivière du Lièvre (River of the Hare). The river has many rapids and cataracts, including the Rapids des Joachims, Caribou, La Roche du Capitaine, the Golots, etc. Its drainage basin, including its tributaries, is computed at 80,000 square miles. Here and there the river opens into beautiful stretches of water, while in other parts it narrows to forty or fifty yards, where boiling cascades fall over rocky ledges.

When, in June, 1613, Champlain ascended the Ottawa to Allumette Island, he inspected, with admiring and critical eye, the many tributaries, cascades, islands and portages of the historic river, and wondered at its beauty and the wealth of forest life through which he sailed. In his history he has left us most interesting and valuable descriptions of the Chaudière and Rideau Falls as they appeared to him when framed in the magnificent grandeur of primeval forest wealth; and of

INDIAN PORTAGE ON THE OTTAWA.
(From an old engraving).

the daily lives of Les Grands Algonquins of the Ottawa. In Champlain's map drawn in 1612, from information furnished by his interpreter, Brulè, the Ottawa is traced almost to where it rises, and Lakes Kipawa and Timiskaming are clearly outlined. It is almost impossible for us, to-day, to conceive, even remotely, the teeming wealth of forest, stream, lake and river, which gave life to the wilderness in the time of the daring Frenchman. Through the darkling woods where, side by side, rose in marvellous profusion, birch, pine, spruce, and hemlock, roamed deer, moose, bear and caribou, and there, too, prowled the wolf, the lynx and smaller fur-bearing animals. Here also, in river, stream and lakelet swam beavers, minks, otters and musk-rats. The waters teemed with edible fish, and furnished abundant sustenance to the wild geese, ducks and loons which floated on their surface. Beyond the Allumette an eternal silence reigned, broken only by the cry of the loon or the bark of hungry wolf. The solitude was primeval and the virgin forest unprofaned by the axe of the white man.

Origin of the River's Name.

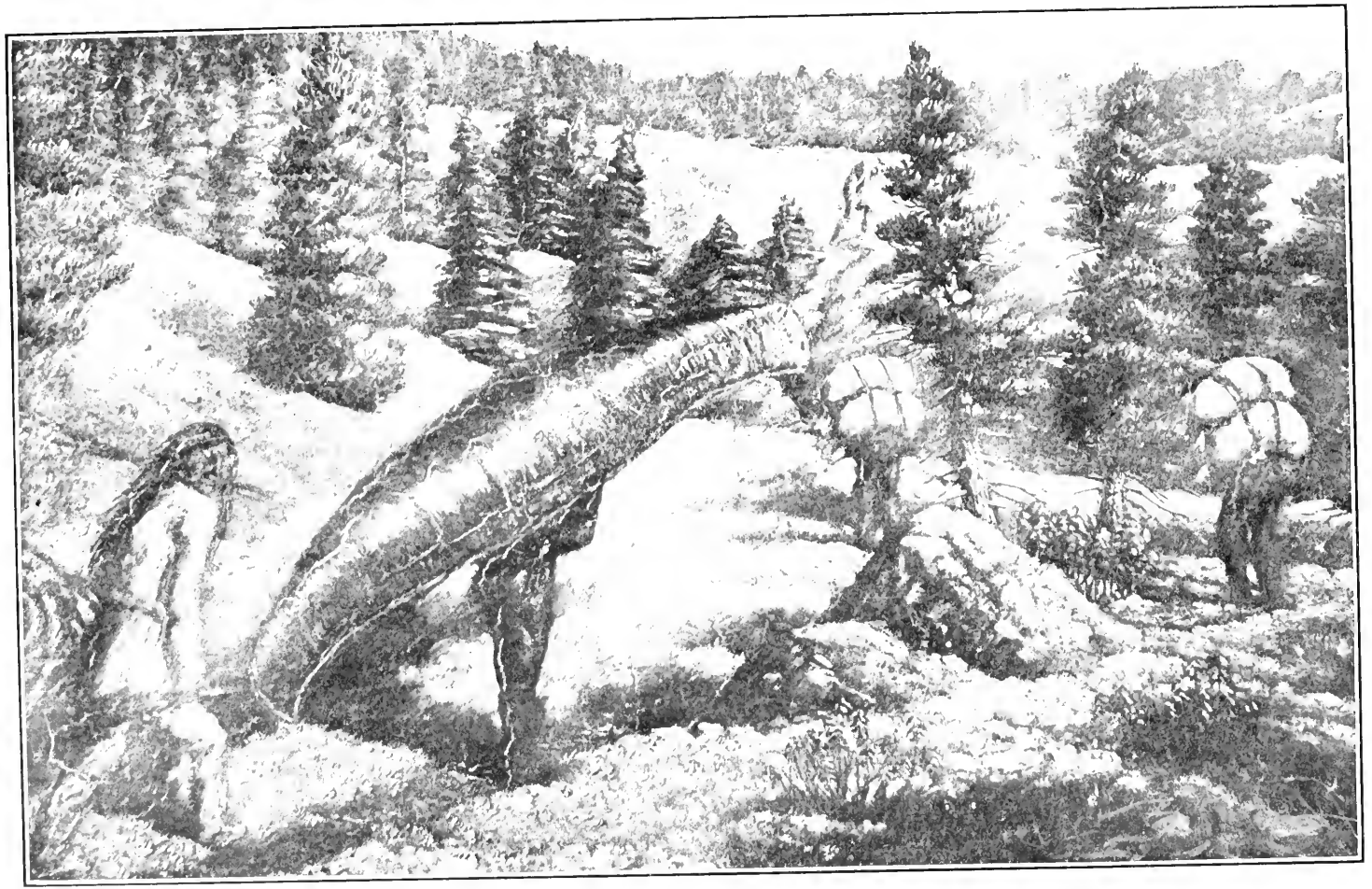
Down this great river in those early days came, from far-away regions, savage Huron and Algonquin traders, whose swarthy skins were feeding grounds for vermin, mosquitoes, black flies, and midges. They carried no provisions, for the forest yielded them an abundance of game and the water supplied them with a liberal allowance of fish. Before closing this brief dissertation on the Ottawa it will be pertinent to inquire into the origin of the name of the river. In Jean Boisseau's map—1643—it has the name of Rivière des Prairies, presumedly after a hunter of that name who had discovered this branch of the Ottawa, north of the Island of Montreal. The name was, in time, applied to the main river, which afterwards became known as the Grand River and River of the Algonquins. Singularly enough Champlain does not, in his maps or writings, mention its Indian name. On Bellin's map (1744) the Ottawa is called the Rivière des Outaouais, but in what year and by whom the name Outaouais was given to the river we have not succeeded in tracing. Even as late as 1660, Father Le Mercier states (Relation 1667) that the Outaouacs (Ottawas) contended that Le Grand Rivière belonged to them, and that only by their consent might any other nation navigate it. It was for this reason, he adds, that all the tribes, except the Hurons, who came to trade with the French were given the name Ottawa*.

The Nipissings, Montagnais, Chippawas and Outaouans or Andatahontas, were all hunters who exchanged their peltries for what the lower Algonquins had to offer them in return. Professors Mooney and Hewitt, of the Bureau of American Ethnology, contend that the Ottawa river derives its name from the Algonquin word *adawe*, which means to trade, to buy, to barter, and the historian, Gilmary Shea (Wis. Hist. Soc. Col. III., 135) tells us that: "After the fall of the Hurons, when trade was reopened with the west, all tribes there were called Ottawas, and the river, as leading to the Ottawa country, got the name." If the river was not called the Ottawa until trade was re-opened with the west, what name had it before this trade was opened? To say that *adawe* is the root word for Ottawa appears to us far-fetched. But why go so far afield when we know that when Champlain was at the mouth of the French River (July, 1615) the tribe inhabiting the lands near its outlet, and, to which he gave the name "Cheveux Relèvès—Standing Hairs," was known to the Algonquins as Outaouan, (Rel. 1640), Outaouaks (Rel. 1656), and Andat-ahouata, (Sagard 1632). This tribe, guarding the French river, which opened the right of way to the Allumettes and other eastern nations, acted as middle men between the lower and the upper Algonquins—the Crees, Sauterns of Lake Superior and the Montagnais.

The Hurons and Petun-Hurons sold them tobacco and sunflower-oil, and the upper tribes, skins and shells, which they re-sold to their eastern kinsmen. Many years before Champlain's visit the right of way to the lower Ottawa was closed to the Hurons by the Iroquois, and the distance was too great for the western tribes

*In the "Relation" of 1670, we are told that the French called all the western Algonquins, Outaouais, but that the name properly belonged to the tribe to which Champlain gave the name "Raised Hairs" (Ottawas). Rochemonteix (vol. I., p. 93), relying on the accuracy of Charlevoix, locates the Ottawas on the Ottawa River, but we find nothing in the writings of the early French to show that the tribe had ever settled in the valley of the Ottawa River.

On page 127, vol. 54, of the Relations we read: "They are commonly given the name Outaouaks, because, of thirty different nations that are found in these countries, the first to come down to our French settlements were the Outaouaks, whose name they bear, has remained with all the others."

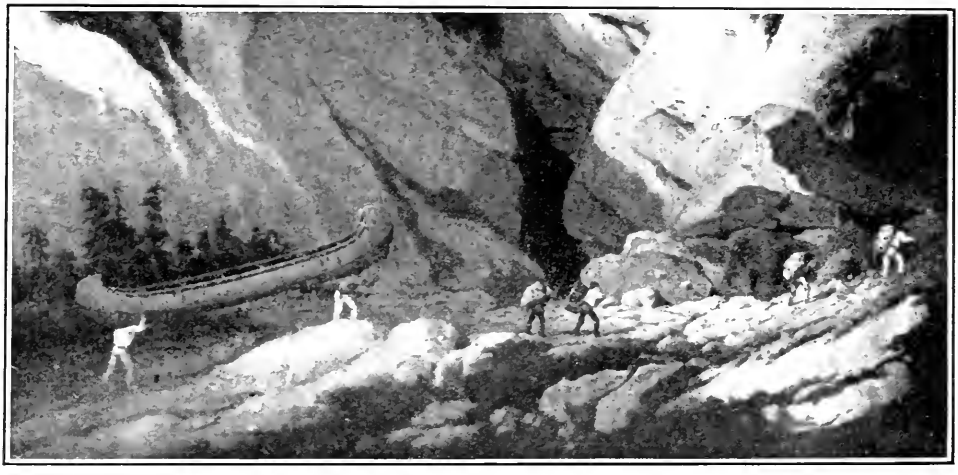


THE PORTAGE
(From a painting by Henry Youle Hinds, in the John Ross Robertson collection).

to attempt the voyage. It is reasonable, then, to assume that from this great trading tribe—the Outaouan—the river Ottawa received its name. The Outaouans were masters of French River and levied a tax upon all the Algonquins of the west bartering with the lower tribes.*

Mythic Origin of the Tribe.

The Ottawas claimed to be descended from three animal families, each of which numbered in olden times five hundred persons. One third of their numbers were of the family of *Michabou*—The Great Hare. The Great Hare was of prodigious size and could spread nets in water one hundred feet deep, and then he was only up to his arm-pits in the lake. One day during a great deluge, when no land was to be seen, he told the beaver to swim away and keep on till he found land, but the beaver did not return, so *Michabou* sent the otter, who in time brought back a little earth covered with foam. Out of this earth Michabou made the land and then went up to the skies.



Mountain Portage.
(From painting by Paul Kane, Osler collection, R. O. M.)

The second family of the Outaouaks were descendants of *Namepich*—the Carp—which deposited its eggs near a river where the heat of the sun hatched them and produced a woman from whom they claimed descent. This is the Carp Family.

The third family came from the paw of *Machora*—the Bear. This family could not say how, or in what manner, the paw of the bear begot them. The family of the Great Hare burned their dead according to instructions given them by their creator, the Hare. The other families buried their dead. Each family worshipped its own head or animal, and, when in dire straits, a member killed one of these animals he addressed its spirit or Manitou, saying: "Do not have any ill will against me because I have killed you; you have sense—you know that my children

*"The Outaouaks claim that the great river belongs to them, and that no nation can launch a boat on it without their consent. Therefore, all who come to trade with the French, although of widely different nations, bear the general name of Outaouaks, under whose auspices they make the journey."
Relations, Vol. 51, 1666-68, p. 21, *et seq.*

and squaw are suffering from hunger—they love you—they wish you to enter their bodies, and is it not a grand thing for you to be eaten by the children of the Great Chief." Such is the mythic origin of the Ottawas condensed from a letter of Father Rasles, who passed the winter of 1723 at Missilimakinak.

We have no means of tracing the hunting grounds of the Ottawas before the arrival of Europeans on the shores of Lake Huron. All we know is that the Jesuit missionaries and Nicolet, the voyageur and explorer, say that, early in the 17th century, the Ottawas occupied Manitoulin Island and the northern and southern shores of Georgian Bay. Behind this we have nothing but unverified tradition. The band of Ottawas which Champlain encountered, when entering Georgian Bay, camping on lands to the west of the Hurons, numbered only three hundred. They did not cultivate their lands, but, like all the Algonquin tribes, were hunters, fishermen and traders. They were in the secondary stage of savagery, tattooed, shamelessly naked, pendants hanging from their nose and ears, and their faces painted in many colours. Champlain enters into interesting particulars bearing on the customs, practices, dress and habits of the tribe. From the peculiar manner in which they cut and dressed their hair Champlain and his Frenchmen called them the tribe of the Raised Hairs.*

At the time of Champlain's visit the strength of the tribe centred in Manitoulin Island, but the three hundred men, women and children, whom Champlain visited twice, were clustered in seven small encampments, and soon after his departure from Huronia probably returned to the parent body. Coming back from Green Bay, in 1635, Nicolet met the Ottawas on their tribal lands, Manitoulin Island. In his "Relation" of 1640 Father Vimont writes: "To the south of the Nation of the Beaver is an island in the fresh water sea (Lake Huron), about thirty leagues in length, inhabited by the Outaouan (Ottawas). These are a people come from the nation of Raised Hairs." But, to be ethnically correct, the Champlain Raised Hairs came from the tribe of the Ottawas of Manitoulin, who, in time, were by the French all called Raised Hairs, as we learn from Du Creux's map (1660), where they are located on Manitoulin Island and are called the "Nation surrectorum capillarum."

When Radisson and Chouart landed, 1658, on Manitoulin, the body of water separating the island from Lake Huron was called the Lake of the "Cheveux Relèvès." The two Frenchmen captained a war party that went in search of a band of Iroquois warriors who were in hiding on the island waiting an opportunity to attack the Ottawas. The Ottawas found and defeated the enemy, bringing back eight dead bodies, which they roasted and devoured, and three living Iroquois, whom they slowly tortured to death, cut up and boiled in their kettles, dividing the morsels among themselves, their children and squaws. "Thus," as Radisson writes, "consoling the sorrowful relatives for their dead, slain in battle."

It seems that time had wrought no change in the savage nature of the Ottawas, for, one hundred years after this frightful feast, their descendants were still cannibals. Father Roubaud, the Abnakis missionary, who accompanied Mont-

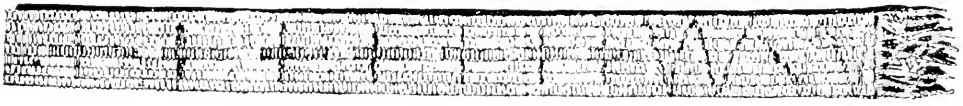
*But, Charlevoix says the Hurons wore their hair in precisely the same fashion. He writes: "The real name of these Indians is Yendats (Wyandots). That of Hurons was given to them by the French who, looking upon the barbarians with their hair clipped short and rising (relèvès) from their heads in a peculiar fashion which gave them a frightful appearance, exclaimed on first meeting them—'Quelles Hures—what boar-heads.' Since then we all call them Hurons."

N.F.—Charlevoix, Vol. I, p. 285, Paris, 1774. See also, Champlain's Voyages, Lav. Ed. p. 512, 513, 546.

calm on his expedition against the English troops holding Fort George, Western New York (1757) records this terrible and bloody orgy of Montcalm's Ottawa allies: "My tent had been placed in the middle of the encampment of the Outaouacs. The first object which presented itself to my eyes on arriving there was a large fire, while the wooden stakes fixed in the earth gave signs of a feast. There was, indeed, one taking place. But, O Heaven! what a feast. The remains of the body of a poor Englishman was there, the skin stripped off, and more than one-half the flesh gone. A moment after I saw these inhuman beings eat with famishing avidity of this human flesh: I saw them taking up the detestable broth in large spoons, and, apparently without being able to satisfy themselves with it. They informed me that they had prepared themselves for this feast by drinking from skulls filled with human blood, while their smeared faces and bloody lips furnished evidence of the truth of this story. What rendered it more sad was that they had placed very near them ten Englishmen to be spectators of their infamous repast."*

Dispersing of the Tribe.

Driven from Manitoulin and the shores of the Georgian Bay by the Mohawks and Senecas, the Ottawas fled to the islands near the entrance to Green Bay, Lake Michigan, settled temporarily by their kinsmen, the Pottawatamies. Fearing a raid from their enemies, the Iroquois, they abandoned the islands. A large band of them fled to Keewena Bay, where the Jesuit missionary, Father Allouez met and



Wampum Belt of Father René Ménard, 1662.

preached to them in 1669. Another body of them joined with a band of fugitive Hurons and found a temporary resting place at Lake Pepin, an expansion of the upper Mississippi River. From here they were driven by the Mississippi Sioux and continued their flight to the east till they arrived at Chagnamegon Bay. Fearing to be again attacked by the Sioux they returned, 1670, to Manitoulin Island, where they became allies of the French, and came under the instruction of two Jesuit missionaries, who established among them the mission of St. Simon. But, in 1670, they again abandoned their old hunting grounds and canoed to Mackinaw, where they joined the Petun—Hurons—at the mission established by Father Marquette in 1671.

In 1701 many of them joined the Petuns and went to Detroit with Cadillac. They now begin to break up into tribal groups. A strong force of Ottawas accompanied Langlade, when, in 1752, he captured the trading town of Pickawillang, when five English traders were taken prisoners and brought to Quebec.

We now hear of them in scattered bands in Mackinac, Saginaw, Baylands, and other lands. A large group of them made an encampment (1707) at L'Arbre le Croche, at the southern end of Lake Michigan. Others of them drifted back to the north shore of Lake Huron and Manitoulin. Like all the tribes who became involved in the wars of the "Whites" the Ottawas now are found wherever the fortunes of war lead them. Some of them followed De Ligneris, when, in 1728, he

*Lettres Edifiantes: Ecrites des Missions Etrangers, Paris, 1842.

left Fort Niagara on a punitive march against the tribe of the Ottogamis or Foxes. A band of Ottawa cut-throats and cannibals were with Montcalm when, in 1757, he laid siege to Fort George. Many of them fought with Pontiac when he attacked Detroit in 1763, others of them were mixed up in the Indian engagements of 1812. All of the Ottawas now living are:—

1. A group on the Indian Reservation, Oklahoma, U.S., numbering about 198.

2. A large body on Manitoulin and Cockburn Islands, about 730.

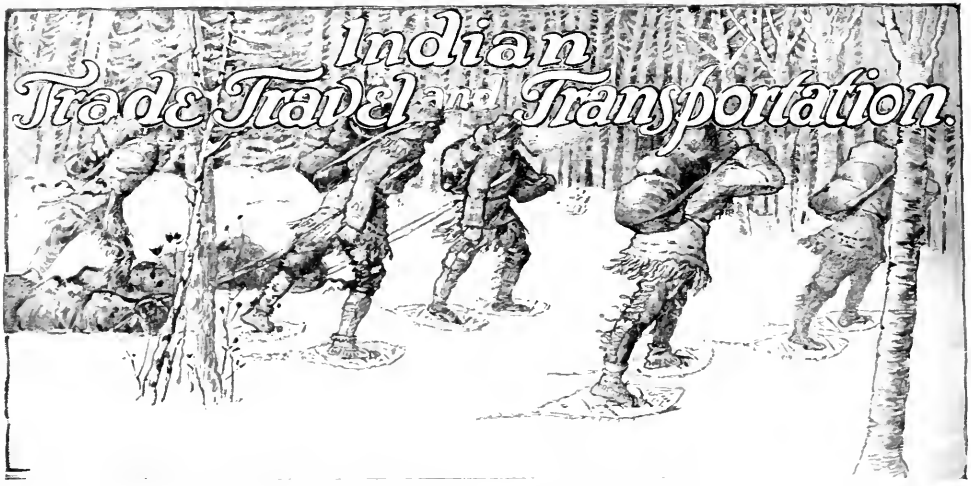
3. A yet larger tribal family, settled in small villages and farm lands in the lower peninsula of Michigan, about 3,800.

Very few of these four or five thousand Ottawas are full-blooded Indians. There are among them many Metis, Griffes, quarter-breeds and incapables, who are permitted by a paternal government to live their own lives in their own way, subject, of course, to reservation discipline.*

Charlevoix, informs us that the Ottawas were cruel and barbarous and were, at times, given to cannibalism, but the fact is they were cannibals by choice and by tradition. La Potherie acknowledges they were, at one time, a very low tribe but improved in their morals by association with the Hurons, but Sagard says that the Hurons, as he knew them, were not more decent than "la nation du bois" who, when he saw them in 1634, went entirely naked.

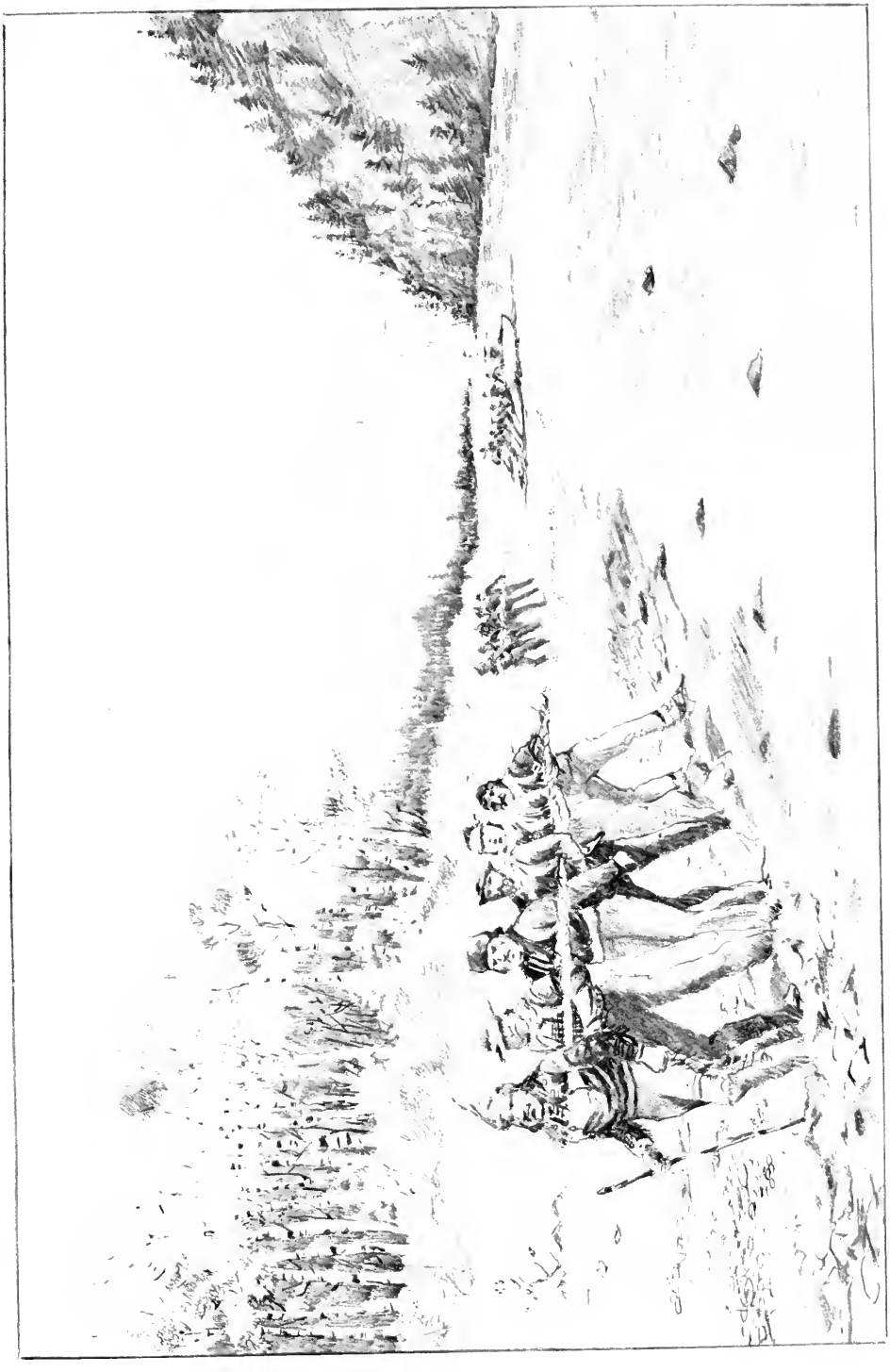
Sympathy with an oppressed and vanishing race has led nearly all writers on the tribes to acquit them of habitual cannibalism. These historians and writers contend that only when an Indian was tortured at the stake and endured his sufferings with stoical fortitude was his flesh devoured by the enemies of his tribe. And this was done, not through hunger, or relish for human flesh and blood, but from a superstition that the warrior's flesh, when incorporated with their own bodies, imparted to the eaters something of the strength and courage of the brave man. We wish we could persuade ourselves that this explanation involved no more than a myth, but the facts of history and tradition emphatically contradict it. The truth is, a savage is a savage, and all savages were and are cannibals. The Ottawas were no better and no worse than all the tribes east of the Rocky Mountains, before and for many years after the coming of the white man.

*The historian, Garneau, after an intelligent and very careful study of the Indian population of Canada, east of Lake Superior in Cartier's time—say in the year 1500—gives their number at two hundred thousand, Vol. I, p. 89. Mr. James Mooney, of the Bureau of American Ethnology, after detailed studies, is of the opinion that the Indian population of America, north of Mexico, at the period of the earliest white settlement was about 1,140,000, of whom about 860,000 were within the present limits of the United States. Mr. Mooney estimates that this number has been reduced by about two-thirds through disease, famine and war following the advent of Europeans. The Indian population of all Canada, to-day is 105,000.



The subject of primitive commerce is of special interest. It sheds much light upon the conditions of life among the prehistoric nomadic Indian tribes that occupied the Province of Ontario before the advent of Europeans. The fact that a very extensive trade was carried on, covering the entire continent north of Mexico, is easily proved. The non-perishable artifacts of the far south were transported, and are found in the kitchen middens of the north; those of the east are found in the west, and *vice versa*. Here, as in the Old World in ancient times, trade was simply an exchange of wares, one tribe producing or manufacturing that which another tribe required; and thus their wants or needs made traffic in those commodities very extensive. For a semi-civilized community, their wares were numerous, including corn, furs, robes, tobacco, wampum, mats, canoes; articles made of moose or buffalo hair, and of porcupine quills; cotton, bead baskets, pipes, weapons for warfare and for the chase; clay pots of all kinds; domestic utensils, and, in short, all sorts of the necessaries of life. With such merchandise a continuous barter was maintained by the various tribes. Frequently, peaceable trade gave place to the appropriation of the commodities a tribe possessed by the power of might; and distance did not in any way deter them. A band of Indians would readily traverse 1,500 miles to settle a difference with some hereditary foe, and, on their return, bring back with them all the loot they could conveniently carry. Consequently, in their kitchen middens are to be found artifacts which are the product of far distant tribes. As our attention is chiefly directed to the pre-Columbian manufactures, and the trade and transportation thereof, as well as to the distribution of those food-stuffs, artifacts, and raw materials over distant parts of the country, we recognize the fact that it is necessary to look closely into the Champlain period to get a full insight into their methods before Eastern traders influenced their procedure in trade.

The great trade routes of Ontario have not had the attention paid to them that their importance deserves. Old Ontario has had her towns built on their village sites, and their main thoroughfares were once Indian trails. In New Ontario, however, it is otherwise: their trails and waterways have not been properly investigated. It is not easy, and is now perhaps too late, to get authentic accounts of the original trading methods of these primitive people, because these methods were so very quickly altered by contact and trade with a more civilized race.

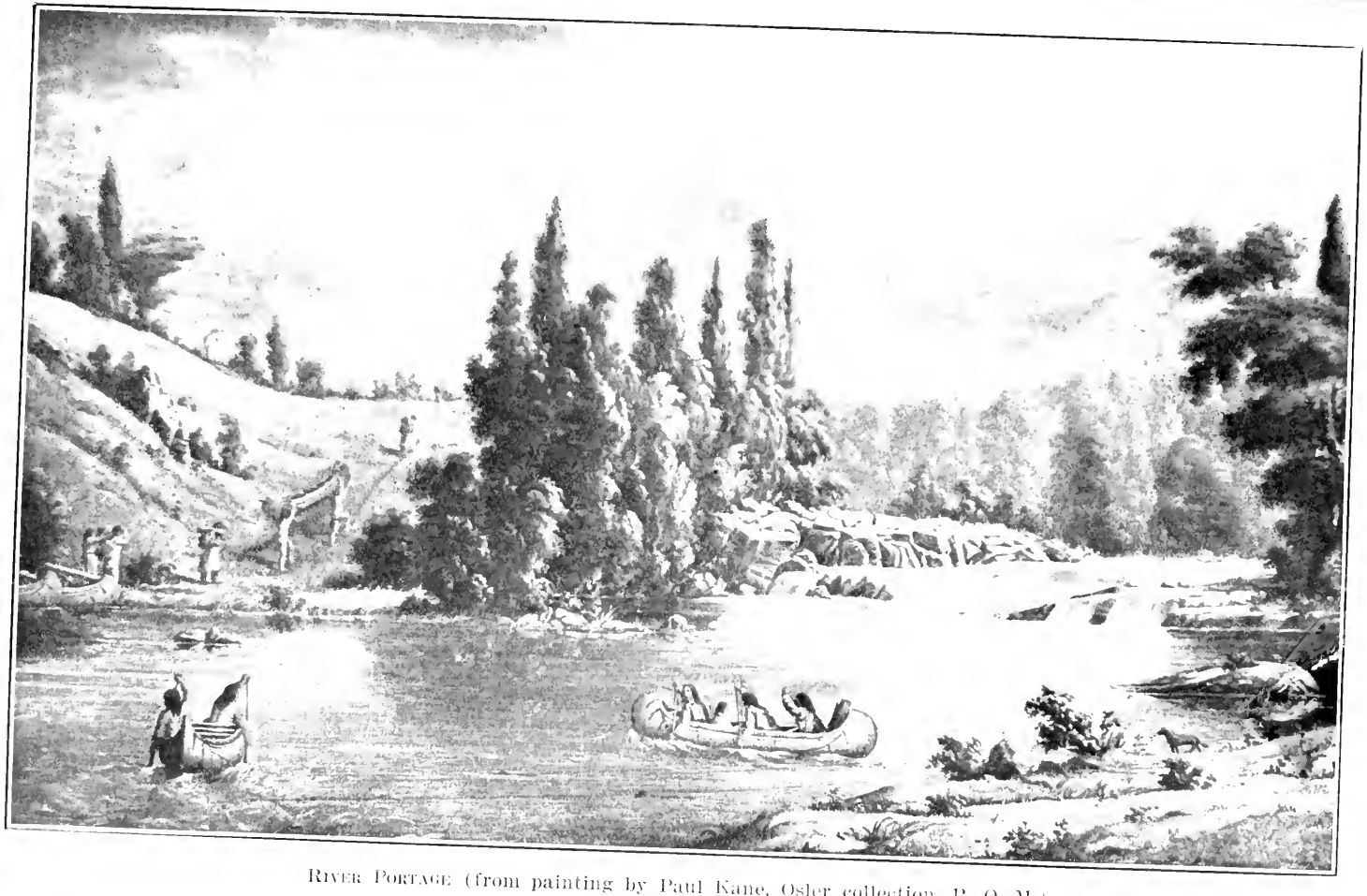


WARPING A BARGE OVER RAPIDS.

Indian corn constitutes a very important factor in their early trade, not only between the various clans of a tribe, but also in intertribal exchanges with northern neighbours who were unable to grow it. James Adair, in his "History of the North American Indians," mentions not only the varieties of corn grown, but also the methods used in preparing it for food. He states that there are three kinds of corn. The first is short and used for drying, the second is yellow and flinty, which they call hominy corn. The third is the largest, of a very soft grain, and is termed bread corn: this, when in full ear, they half boil and dry, either by the sun, or over a slow fire. They boil it also with venison or other meats. In July, when the chestnuts and corn are green and full grown, they half boil the former, and take off the rind; and having sliced the milky, swelled, long rows of the latter, the women pound it in a large wooden mortar, which is wide at the mouth, and gradually narrows to the bottom: then they knead both together, wrap them up in green corn-blades of various sizes, about an inch thick, and boil them well, as they do all kinds of food. This sort of bread is very tempting to the taste, and reckoned most delicious to their strong palates. They have another sort of boiled bread, which is mixed with beans, or potatoes: they put on the soft corn till it begins to boil, and pound it sufficiently fine: their invention does not reach to the use of any kind of milk. When the flour is stirred, and dried by the heat of the sun or fire, they sift it with sieves of different sizes, curiously made of the coarser or finer cane-splinters. The thin cakes, mixed with bear's oil, were formerly baked on thin broad stones placed over a fire, or on broad earthen bottoms fit for such a use: but now they use kettles. When they intend to bake great loaves, they make a strong blazing fire, with short, dry, split wood, on the hearth. When it is burnt down to coals, they carefully rake them off to each side, and sweep away the remaining ashes: then they put their well-kneaded broad loaf, first steeped in hot water, over the hearth, and an earthen basin above it, with the embers and coals a-top. This method of baking is as clean and efficacious as is possible in any oven: when they take it off, they wash the loaf with warm water, and it soon becomes firm, and very white. It is likewise very wholesome, and well-tasted, to any except the vitiated palate of an epicure.

No extensive trade was carried on in meats or other perishable food products. Berries were dried and stored and at times used in trade. Next to corn, probably the most largely used article of trade was pemmican, a food preparation extensively used in the northern parts of the province, made by cutting the meat of the deer into thin slices and drying in the sun, or over the smoke of a slow fire. The thin slices were placed over a small pole: this was suspended horizontally, and covered with spruce boughs, an opening being left at both ends. The fire was made on the windward side and the smoke passed through. When well smoked and dried, it was pounded fine between stones, and with this powder was incorporated one-third-part of melted fat. To this mixture dried fruit, such as choke or June berries, was sometimes added. The whole was then compressed into skin bags in which, if kept dry, it might be preserved for years. Fish pemmican was also made by some of our northern tribes. In those pre-Cabotian days, when no *coureur-de-bois* or Dutch trader was known, articles such as these were extensively used in their commercial transactions.

The tobacco plant, which was carefully dried by the Indians and kept as free from moisture as possible, was put in bags of deerskin, or birch bark, or baskets, neatly woven of roots and grasses. Largely grown as it was in Canada both by the



River Portage (from painting by Paul Kane, Osler collection, R. O. M.)

Attiwanadrons, Petuns and Hurons, it necessarily follows it must have been an article extensively used in trade. The northern Algonquin tribes were supplied from the extensive tobacco fields of Lambton, Kent and Simcoe counties.

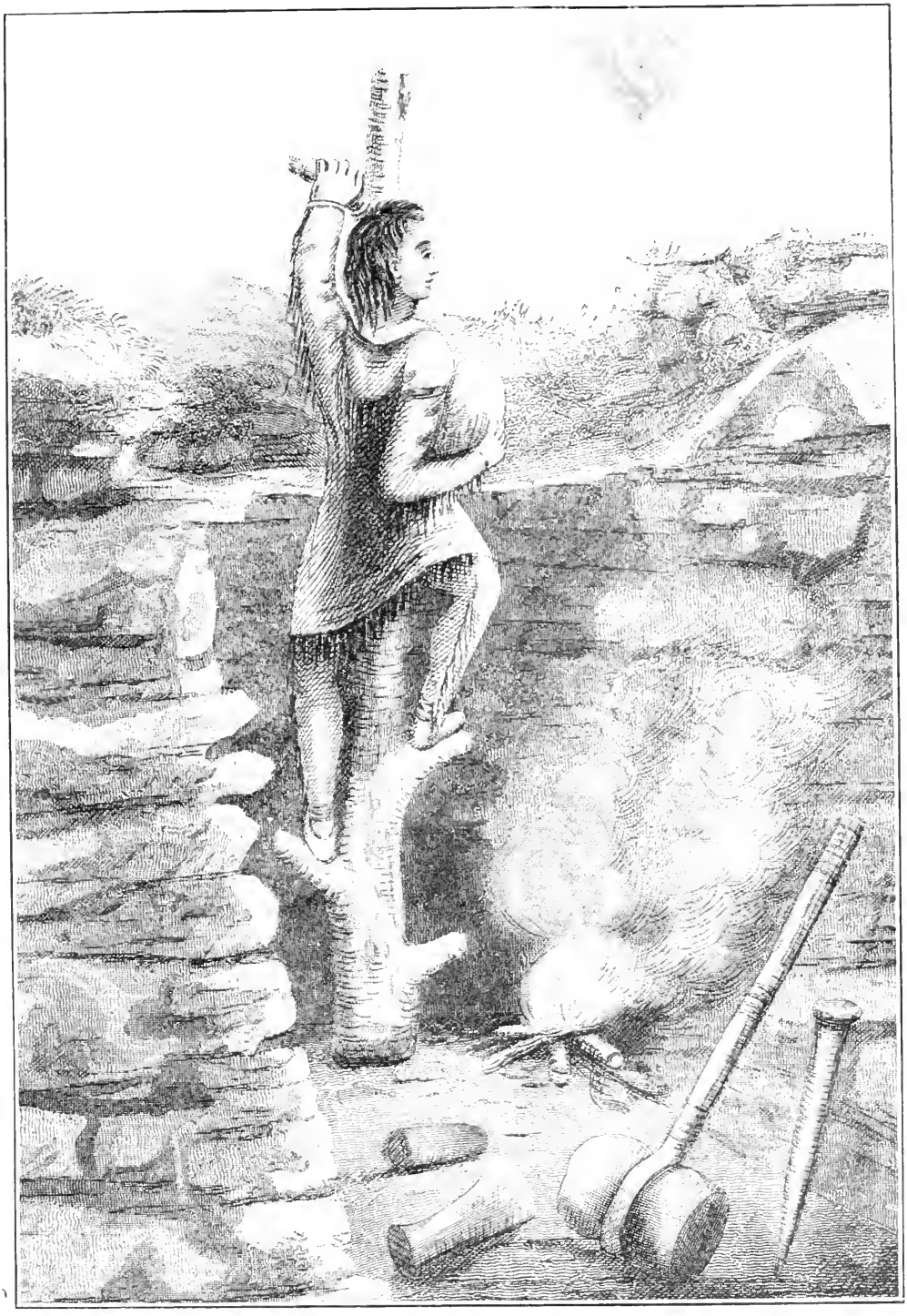
Flint, which is found abundantly in large rounded modules in the cretaceous formations of England and France, and has played such a very important part among the prehistoric races of Europe, does not occur in this Province (or, in fact, on this continent). But Ontario is rich in various kinds of stone of a silicious character, which, on account of their hardness and conchoidal fracture, were well adapted to fill the place of the missing variety. The term "Flint" is, however, used in this country to include a very large number of stones used for the manufacture of a variety of arrow-heads, spear-points, knives, and numerous other artifacts employed in almost every vocation of life. Probably the most extensive flint factory in Ontario was that on the north shore of Lake Erie. From this place were transported bodies of half-worked flint (or chert) to the various artisans of the different tribes, and by them made into the articles required. Then again, not only those manufactured at the original site, but the others partly finished, were carried long distances. Flint points made from Erie flint have been found as far west as the banks of the Saskatchewan near Edmonton, and most of the Indians of the Northern Algonquin tribes acquired their supply by trade with their southern neighbours. In this article alone, before contact with Europeans, a very extensive trade was carried on.

SLATE.

In the commercial pursuits of the Indians, slate must have been a very important factor. We find it in general use by all the tribes north of Mexico, and the vast number of slate artifacts in the Ontario Provincial Museum attest to its general use by all the tribes occupying territory within this Province. The fine grained, greenish, and striped slate of the Middle States and Canada were very extensively employed in the manufacture of a great variety of objects of somewhat problematic purpose, including banner stones, bird-shaped stones, and perforated and sculptured tablets.

COPPER.

By far the most striking substance in the basin of Lake Superior, which had attracted the attention of the early inhabitants, was, evidently, the native copper, which, in the form of detritus, exists so extensively in that quarter. This metal was found and mined in large quantities in Isle Royal, situated at the western end of Lake Superior, in the Rainy River district. Early travellers speak of native copper being found in many parts of the continent. This evidently was glacial copper, carried down in those ages long past, about which we know so little, by means of glaciers, from those immense copper fields situated north-west of the Hudson Bay, on the Copper Mine river, where, according to Tyrrell, great boulders of native copper are to be found on the surface. It is found in the Lake Superior region also *in situ*, as part of the product of veins in the trap rock, and has been scattered abroad, by geological action, along with the erratic block and diluvial deposits. It is also found to exist, to an uncommon extent, in its original positions along with the ores, spars, and vein stones, in both which locations the Indians, who called it Red Iron, searched for it. They employed it in making various ornaments, imple-



INDIAN COPPER MINING ON LAKE SUPERIOR. "SCHOOLCRAFT."

ments and instruments. Arm and wrist bands, pyramidal tubes, or dress ornaments, chisels and axes, all, in every instance, were wrought out exclusively by mere hammering, and skilfully shaped without the use of the crucible, or the art of soldering. Such is the condition of the manufactured article, as found in the gigantic Grave Creek Mound, and in the smaller mounds of the Scioto Valley, and in fact, wherever it has been scattered, in early days, through the medium of the ancient Indian exchanges. From the investigations into this subject, the area of the basin of Lake Superior must be regarded as the chief or primary point of this intermediate traffic in native copper; and, so far as we know, it appears to have been in the hands of the Algonquin tribes: at least, those tribes were found here at the opening of the sixteenth century, when these portions, generally, of the (then) territories of New France were first visited. (*Schoolcraft*, Vol. I, page 66.)

INDIAN TRAVOIS

SHELLS.

Personal vanity is a prominent characteristic of the North American Indians; and a substance so pleasing to the eye, and so easily worked, could not fail to attract the attention of these primitive peoples in the earliest times. The shells of marine and fresh-water molluscs are, above other natural productions, particularly suited to be made into ornaments; and it is not surprising they were used for this purpose in all parts of the world. These objects of trade were transported from the sea to the most distant points inland, and there they were exchanged for other articles of which the coast people were in want, such as hides, a red earth for painting their faces, chert for arrow-heads, hard reeds for the latter, tufts of deer's hair dyed a scarlet colour, which were worn as head-dresses, besides many other products of their handicraft. Wampum in its various forms was extensively used in trade as money; and the wampum made from the Gulf of Mexico and Atlantic shells had been distributed north and west over most of the continent. Wampum

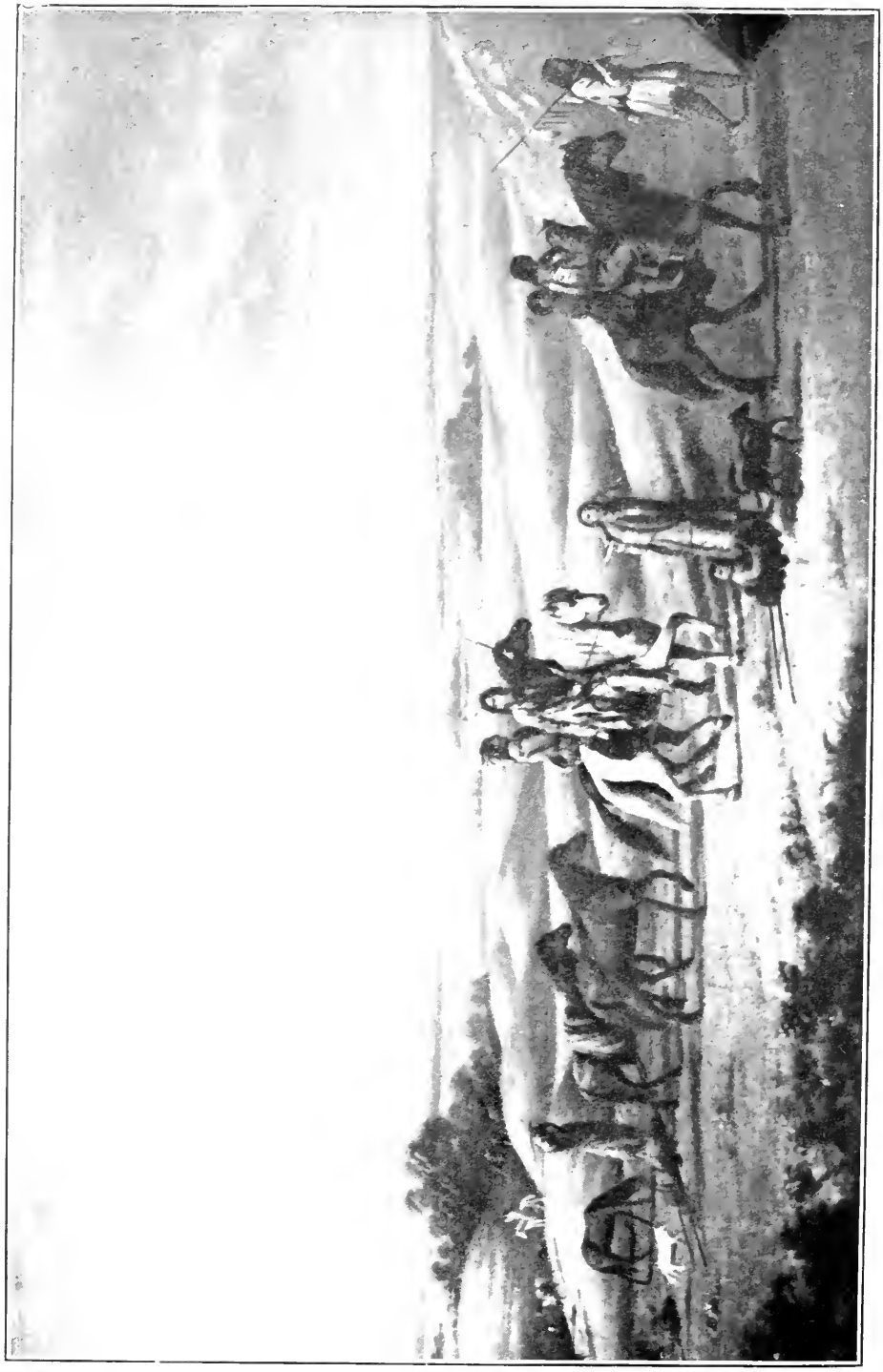
beads in the pre-European times were largely fashioned from wood painted and properly adorned, before Eastern methods of manufacture dawned upon them. Shell beads then came to be more extensively made, and we find in the kitchen middens all over the western portion of the continent, the evidence of a very extensive trade carried on in these articles. In the neighbourhood of Lake Metad, Wentworth County, bushels of these beads have been found, all showing the evidence of European manufacture, and of being brought from Quebec and New York, centuries before the white man made his home in this locality.

Loskiel makes the following statement in reference to wampum:—"Before North America was discovered by the Europeans, the Indians made their strings and belts mostly of small pieces of wood, cut to an equal size, and dyed white and black. They made some of shells, which they highly esteemed, but they manufactured them very rarely, because this labour required much time for the want of the proper tools, and the beads, moreover, were of a rude and clumsy appearance. Soon after their arrival in America, the Europeans began to manufacture wampum from shells, very neatly, and in abundance, exchanging it to the Indians for other commodities, thus carrying on a very profitable trade." (Loskiel Mission de Evangelischen Bruder, p. 34.)

Schoolcraft, in Vol. I, page 67, states that, in exchange for the native copper of Lake Superior, and for the brown pipe-stone of the Chippewa river of the Upper Mississippi, and the blood-red pipe-stone of the Coteau des Prairies west of the St. Peter's, they received certain admired species of the sea-shells of the Floridian coasts and West Indies, as well as some of the more elaborately and well-sculptured pipes of compact carbonate of lime, greywacké, clay, slate, and serpentines, of which admirable specimens, in large quantities, have recently been found by researches made in the inverted-bowl-shaped, or sacrificial mounds of the Ohio valley, and in the ossuaries of the Lakes. The makers of these may also be supposed to have spread, northwardly, the various ornamented and artistic burnt-clay pipes of ancient forms and ornaments: and the ovate and circular beads, heart-shaped pendants, and ornamental gorgets, made from the conch (which has received the false name of ivory), or from fine bone and horn. The direction of this native exchange of articles appears to have taken a strong current down the line of the Great Lakes, by way of Lakes Erie and Ontario, along the coasts of the States of Ohio and New York, and into the Canadas. Specimens of the blood-red pipe-stone, wrought as a neck ornament, and of the conch bead pendants and gorgets, and of the antique short clay pipes, occur, in the ancient Indian burial grounds, as far east as Onondaga and Oswego, in New York, and in the high country which abounds in such extraordinary sepulchral deposits of human bones and Indian ornaments, about Beverly, and the sources of the several small streams which pour their waters into Burlington Bay on the north shore of Lake Ontario. At the latter place I obtained also specimens of the *pyrola perrersa* in an entire state. All these are deemed to be relics of the Ante-Cabotian period. It may be necessary, perhaps, hereafter, to except from this character the antique, short, ornamented, clay pipes named.

TRAVEL.

The methods of travel were somewhat limited. On foot, they were fleet as an arrow; in the forest, quick and far seeing. An Indian in those early days could plunge into the forest and traverse hundreds of miles arriving at his destination



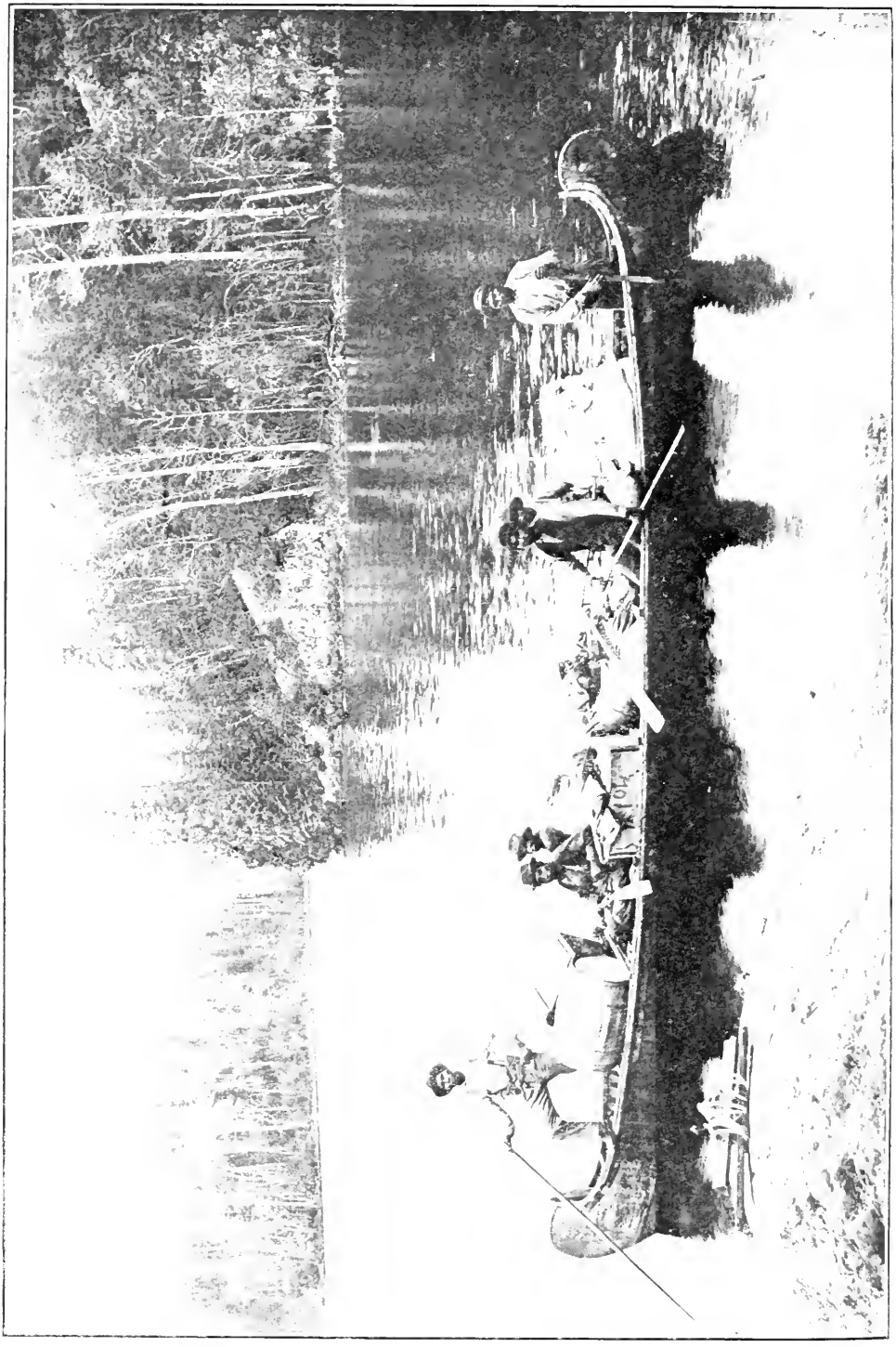
INDIAN MODE OF TRAVEL (from painting by Paul Kane, Osler collection, R. O. M.)

with exactness. A Mississauga Indian, in early European times, could leave his camp where Toronto stands at present, and make his way in an almost straight line to where Godrich looks out over the expanse of Lake Huron. Their fleetness of foot in traversing the forest wilds of Ontario was a revelation to the European adventurer. As the continent to-day is a network of railroads, so, in these prehistoric times, it was covered with well-recognized Indian trails leading in all directions from great tribal centres. In the county of Simcoe, the first settlers could point out to you the various trails leading from one village site to another; and this is also true of the territory occupied by the great Iroquois Confederacy in the State of New York.

SNOWSHOES.

The most important articles to hasten travel during the long winters with deep snow, were the thong-woven shoes of the aborigines, used and manufactered to-day just as they were centuries ago. In methods of making, they show an ingenuity, which, if the same brain energy had been exercised in other walks of life, might have caused the primitive Indian to have occupied a position amongst our semi-civilized races of to-day.

Mason, in describing the snowshoe, states that the parts are the wooden rim, toe and heel crossbar of wood, or rawhide, extra strengthening bars, foot netting in large meshes, with a stout thong for the foot to rest upon, toe and heel netting closely meshed with babiche or twisted sinew, and foot-lines for attaching the shoe. The varieties of their snowshoes were almost as great as their linguistic stocks. With these articles of footwear the Indians were enabled to travel great distances following their dog-sledges. During the winter hunts, they were of immense value and service; slipping stealthily over the snow, they were upon their prey before it was aware of their presence. In endurance, they are equalled by few, and surpassed by none of the races the world over. The Indian on the sides of the Andes in South America, the Indian of Mexico or California, or his no less illustrious and fast-running brother of Ontario, are all even to this day celebrated for their speed and endurance. These men have been utilized on both continents of America by the eastern races succeeding them, whenever long distances had to be covered in the shortest time, such as when carrying the mails or express parcels. It is only a few years since those fleet runners in our Canadian west, with their dog-sledges, distributed the mails from Fort Garry away west to the Rockies, and as far north as Athabasca Landing. Our own Algonquin Indians were celebrated travellers. They covered the continent from the Atlantic to the Rockies, and from the Gulf of Mexico to the headwaters of the Saskatchewan. While their modes of transporation were not numerous, yet, for a semi-civilized race, they were of the highest order. No civilized or semi-civilized race the world over had ever produced anything to surpass the birch-bark canoes manufactured by the Algonquins, living in what is now Ontario. And throughout the bounds of this great Province, from the Ottawa to the headwaters of the Lake of the Woods, and from Hudson Bay in the far north to the world-renowned waterfalls of Niagara in the south. During the summer, in pre-French times, those waters were dotted in many places with the various forms of canoes manufactured and utilized by the aborigines. Besides their canoes for speedy travel, which carried only one or two passengers, they had their transportation canoes of great length and carrying capacity. These canoes are well described by the early missionary fathers, as seen by them when bringing their



HUDSON BAY TRANSPORT CANOE

huge cargoes of pelts down the Mattawa, Ottawa, and St. Lawrence as far as Quebec. They were adopted by the voyageurs of a later date, and became an important factor in earning dividends for the Hudson Bay Co. and its great rival. "All this they do so easily," says one of the missionaries, "through the skilful use and great convenience of canoes, which are little skiffs made of birch-bark, narrow and closed at both ends, like the crest of a morion: the body is like a large hollow cradle; they are eight or ten feet long; moreover, so capacious that a single one of them will hold an entire household of five or six persons, with all their dogs, sacks, skins, kettles, and other heavy baggage. And the best part of it is, that they can land wherever they like, which we cannot do with our shallops or sailing boats; for the most heavily-loaded canoe can draw only half a foot of water, and unloaded it is so light that you can easily pick it up and carry it away with your left hand: so rapidly sculled, that, without any effort, in good weather, you can make thirty or forty miles a day; nevertheless, we scarcely see these savages posting along at this rate, for their days are all nothing but pastime. They are never in a hurry."

Their war canoe was of a heavier build, and capable of carrying as many as twenty-four warriors. It was frequently made from the first log of a pine tree, shaped and hollowed by the use of fire, and with stone axes and adzes. When finished by polishing, they were, in utility, almost as good as their birch-bark brothers, only much heavier. By means of these canoes much of the travel and transportation during the summer months was carried on. In their handling of a canoe they were remarkably clever. The portage, from one river or lake to another, were all well-known to them, and the speed in which they transferred across a portage was simply marvellous. In the winter time, when river and lake were one glistening sheet of ice—in addition to their snowshoes, a sledge called by them a "train" was drawn by dogs, or else by hand.

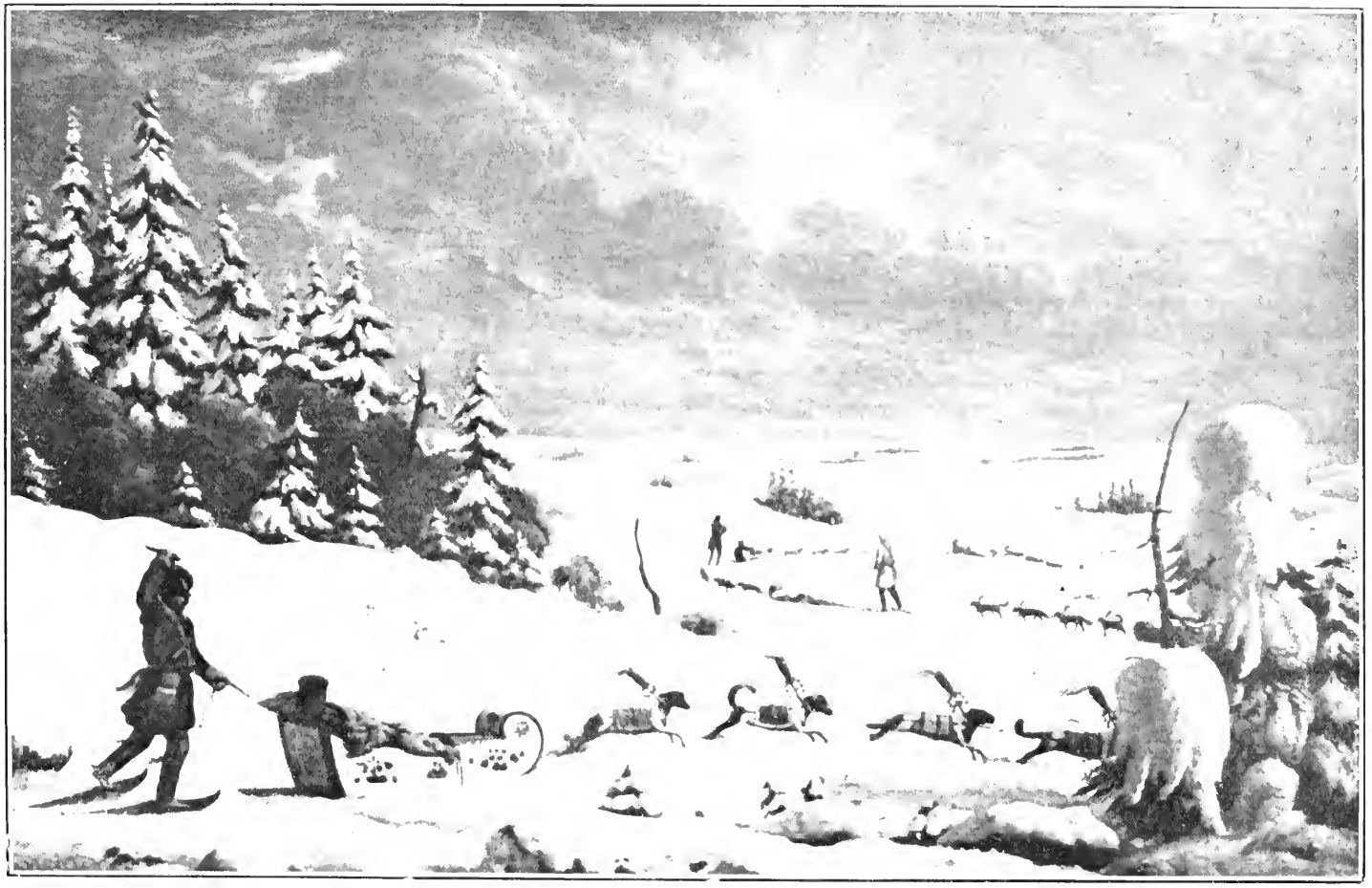
TRAIN.

The train was a primitive conveyance for winter use, and was adapted by the early settlers from the rude contrivance employed by the Indians; and, with many variations and elaborations, is still in use throughout Canada. The form of "train," which is perhaps most like the conveyance referred to in our text, is thus described by Warburton Pike, in his "Barren Ground of Northern Canada," (London, 1892) p. 90: "We used the ordinary travelling sleigh of the north: two smooth pieces of birch, some seven feet in length, with the front ends curled completely over, and joined together with cross slats secured with babiche (strips of moose-hide) having a total width of sixteen inches."

The "toboggan," so often used for sport in both Canada and the United States, is another form of "train," and is but a smaller and more ornamental style of the "cariole" used in the far north: the latter, drawn by dogs, consists of a thin board, fifteen or twenty inches wide, and ten feet long, turned up at one end in semi-circular form. A light box, lined with fur robes or blankets, is attached to this board, in which the passenger sits.

MOCCASINS.

The shoe is especially an accessory of travel: it belongs to the road. In all countries where mere protection of the foot was the motive, those substances were



INDIAN WINTER TRAVEL BY DOG TEAMS (from painting by Paul Kane, Osler collection, R. O. M.)

chosen that were most abundant and from which, in a short time, new shoes could be constructed. In Ontario this class of footwear goes by the generic name of moccasin from an Algonquin word having a similar sound.

Moccasins have their dispersion in those areas of North America where the great mammals were in abundance, and where the ground was adapted to their usage. The people were ever on the move. In the Canadian region where the caribou was the prevailing mammal and no good thick hide could be found for soles, the shoe was cut from a single piece.

The land of the buffalo and of the elk, because of the quality of the hide and the exigencies of region occupation and climate, had another set of types.

On arriving in the cactus country the Indian had to guard his feet and his legs as well, and found in the ample folds of an entire deer skin for each foot, and a thick sole well turned up in front, the protection he needed. The patch of leather on the Mexican sandal lacing is for the same end. In point of fact there were and are three principal classes or kinds of the moccasin:

1. The Athapascan type, a soft gaiter coming well up on the ankle, made of a single piece with decorated tongue in front, lapels of flannel and buckskin over the lacing behind, and the gaiter top. Found in Canada and on the west coast.

2. The low, much decorated slipper moccasin of the plains and of the United States east of the Rockies, with endless tribal varieties.

3. The boot, with long top to wrap about the limbs.

EKARENNIONDI.

THE ROCK THAT STANDS OUT.

In the Archæological Report of 1902, the Rev. A. E. Jones, S.J., contributed a very learned and exhaustive article dealing largely with the ancient village sites and their location in the Country of the Petuns. He located the "Standing Rock" on Lot 30, Con. XII, Nottawasaga Township, several miles south of Collingwood.

In 1908, Mr. John Lawrence, a member of the Huron Institute, contributed a paper on the above subject to that Institute. Living, as he did, in the heart of the country of the Petuns, and invigorated by the bracing atmosphere from the Georgian Bay, and the Blue Mountains to the west, we make no apology for reproducing most of his article as it appeared in their Report of 1909.

"The country surrounding the town of Collingwood is rich in historic interest. Especially to the antiquarian do the early records and traditions of the aboriginal inhabitants of the Georgian Bay district appeal. For untold centuries the Indians have woven around its islands and shores the legendary lore of their tribes. On the Manitoulin Island was the abode of the 'Great Manitou,' who, before lying down to his winter sleep, smoked his last pipe. The smoke floated away upon the air, and drifted over the waters and shores, thus forming the soft misty haze of Indian summer. Somewhere on the Blue Mountains, to the west of the town of Collingwood, and not far from the shore of the lake, was a certain village situated near a rock, dedicated by the Indians to the departed souls of their ancestors, who were supposed to pass that way to 'The Happy Hunting Ground.' Were it not that the existence of this particular village is recorded in the Jesuit 'Relation' as an historic fact, it would in all probability be likewise relegated to the realms of Indian mythology. Geologists assert that the Georgian Bay possesses one of the oldest rock formations in the world, and the fertile lands on the southern shore are recognized as one of the finest fruit producing districts in Canada, the Indians being sagacious enough to select the adjacent mountain slopes for the culture of tobacco and corn, there being such an abundance of the former plant produced as to give the tribes that inhabited this region the name of the Petun or Tobacco nation. This nation along with some tribes of the Algonquins, who intermingled with them, were the allies of the Hurons, who dwelt on the opposite side of the bay, known as the Huronian peninsula, the population at the time of Champlain's visit in 1615 being estimated at about thirty thousand souls. The much dreaded Iroquois, who came from the southeast, were the common foes of these Huron and Tobacco nation tribes.

"In regard to the position of the 'village of departed souls,' called by the Indians 'Ekarenniondi,' and subsequently dedicated by the Jesuits to St. Mathias, we quote from their 'Relations' as follows: From Father Brebeouf's, dated Ihonatiria, July 16th, 1636, p. 155, Quebec edition: 'One day I asked one of our savages where he thought the village of departed souls was. He answered "That it lay in the direction of the Petun nation, that is, toward the west, eight leagues from us, and that some had seen them as they journeyed on: that the road they followed was wide and pretty well beaten, and that they passed near a rock, which they (the Hurons) called Ekarenniondi, which is often found embellished with the paint with which they were wont to daub their faces."' Father Bressani places them further 'towards the setting sun.' He says, 'On the shores of this lake (Huron), there exists a nation which we call the Petun (Tobacco nation), because

STANDING ROCK, AS DESIGNATED BY REV. FATHER A. E. JONES, S. J., ON LOT 30, CON. 12, TP. OF NOTTAWASAGA.

it raises an abundance of this plant. It lay but thirty-five or forty miles from us.' And again in referring to the fugitives from the Huron villages destroyed in 1649, he writes: "Women and children and many aged men who had reached their hundredth year, journeyed all night long on the ice, intent on reaching the country of the Petuns more than forty miles away." On page twenty-six of this Relation of 1649 we read: "As the inhabitants of the Huron towns dispersed, they followed the different routes in their flight. Some threw themselves into the mountains, which we call the Petun nation." On account of the difference in the estimated distance made by even this last-mentioned missionary, we cannot be too exacting in this particular. Mr. M. Gaviller, C.E., places the distances by trial route, from Ossossane to the mountain west of the town of Collingwood, at about twenty-six miles, and from Fort St. Marie I on the Wye, forty miles. For the purpose of this paper it is sufficient to know that Huronia was on the east side of the Bay, and the Petun country on the western side, on the Blue Mountains called by the missionaries the Petun mountains of St. Jean, where they had established two missions, which were about twelve miles apart, the one furthest to the south being known as the mission of St. Jean, the Central post being at a town of the same name, but the Indian appellation was Etharita, denoting the ripening or maturing place, where dwelt the Wolf tribe. The other mission station was at a distance of about twelve miles from St. Jean, and was located at the town called St. Mathias, though the Indian name was Ekarenniondi, signifying 'The Rock that Stands Out.' From the Relations of 1650, p. 8, 1 coll., we learn for a certainty that St. Jean lay in a southerly direction from St. Mathias.

"It is therefore apparent that the mission of St. Mathias occupied the stretch of mountain extending northward to the Georgian Bay. That the distance between the two mission stations was not great, nor the road very difficult, we may infer from the following extract: 'The town of St. Jean was destroyed by the Iroquois on the 7th day of December, 1649, about three in the afternoon, when Father Charles Garnier was massacred and the town reduced to ashes. News of the devastation having reached St. Mathias that night, the next day Garreau and Grelon, the resident missionaries at St. Mathias, went over to St. Jean, and officiated at the interment of the late devoted missionary, burying him on the site of the chapel, and then returned the same day.' It is also stated in this connection that Father Chabanel, having received orders to escape from St. Jean, passed by the mission of St. Mathias, where two of our Fathers were in charge, on his way to headquarters, then established at Christian Island. In regard to the position of St. Jean from St. Mathias, it is quite apparent that it was situated in a south-easterly direction along the line of the mountains of St. Jean, and not beyond them in a south-westerly direction, in Osprey township, as suggested by Rev. A. E. Jones, S. J., in the Archæological Report of 1902. From the Relations of 1650, p. 8, 1 coll., we read: "In the mountains which we call the Petun country, we had for several years two missions, in each of which two Fathers were stationed." It is here distinctly stated that both of these missions were in the mountains, which run in a south-easterly direction, consequently, St. Jean was also to the south-east. Let it be noted that in each of these missions two Fathers were stationed, and that a mission comprised a tract of country containing several towns, and, for the sake of convenience, it is probable that the most central town in each would be headquarters for that particular mission. The mission of St. Mathias, where dwelt the Deer Tribe, occupied that stretch of mountain extending northward to the Georgian Bay. The site of the headquarters of this mission, which was the town

of Ekarenniondi, where 'The Rock Stands Out,' has become the source of considerable speculation and controversy. Several exploration parties have visited the mountain in search of the Standing Rock, and wherever a peak or spur appears above the surface, it has been located by some one, with the result that this historic rock has not hitherto been actually identified, and the Petun country has been without a landmark or starting point, from which the distances to other villages could be estimated, and their true names assigned to them. It would appear that the search has been more for a secret rock in some impenetrable mountain fastness, rather than a sacred rock easy of access from the village with which it was associated. Beginning with the most northerly village in the St. Mathias group, whose site is found on the shore of the Bay on Lot 20, Con. 2, Collingwood township, owned by Thomas Martin, we find the second situated on Lot 14, 2nd concession of the same township. Continuing along the mountain range inland, several other village sites are found, an important one being No. 6 on the farm of Alex. Currie, Lot 34, Con. 12, Nottawasaga, situated in the Pretty River Valley, at the foot of the mountain, which up to this point, where it is intersected by the river, runs almost due north and south, while on the opposite side of the valley, it veers off rapidly to the south-east. It would therefore appear that the territory up to this point, including the villages enumerated, would be specially adapted by nature for the abode of one Indian tribe, and would comprise the mission of St. Mathias. The distance between the extreme points is from twelve to fourteen miles. It would be most convenient that the principal mission station should be founded by the missionaries at a central village of this group, providing it is surrounded by the necessary physical features, and otherwise corresponds with the description given in the Relations.

"Regarding the adaptability of this site as a centre for the mission, and its likelihood of striking the savage as being appropriate for the village of departed souls, we find that it does not meet the requirements in any one particular. It is in the valley at the foot of the mountain, and there is no rock within easy access of the village. The one popularly known as the Standing Rock, visited by Father Jones' expedition in 1902, is at least two miles distant, and, when the 'primeval forest held sway,' must have been almost inaccessible, and as yet is only reached with the greatest difficulty. This comparative fragment of rock is only about twenty feet in breadth and thirty or forty feet high, and its entire available surface would soon have become covered by the embellishments and paint alluded to in the Relations had the Indians resorted thither during their religious ceremonies. There is no indication of any inscription, either ancient or modern, being, as described by Father Jones, a 'bare rock in a field of shapeless ruin.'

"The village site near Craigleith, on the farm of Thomas Martin, is picturesquely situated on a sandy plateau near the shore of the Bay, with the Blue Mountain in the immediate background, but, as there is no rock in the vicinity, we must look elsewhere for the solution of the riddle of Ekarenniondi, which brings us again to the central site lot, the Petun city on the hill. The numerous visitors to the Blue Mountain caves, formerly known as the 'Indian caves,' five miles west of the town of Collingwood, are doubtless unaware that just beyond their shadow, at a distance of about two arrow shots, is the site of a once populous Indian village, situated on what is perhaps the most imposing eminence on the whole Blue Mountain range, and which covers an area of about fifteen acres of land. The blind line road, second concession of Collingwood township, runs directly through the village, so that it is half on Mr. Samuel Haney's farm, and half on the farm

now owned by Mr. Cook, whose uncle, Mr. Thos. Smith, was the pioneer who first cleared the land. From the commanding position occupied by this site can be seen an extensive panorama of romantic scenery. Looking southward, the country of the Petuns is visible to where the mountain is intersected by the Mad River

The Rock That Stands Out—Haney Farm

at Creemore, while to the north-west is the broad expanse of the Georgian Bay, with Ahendoe (Christian Island) and Tiny shore (old time Huronia) discernible in the distance, where were situated the Huron villages of Ihonatiria and Ossossane, the abode of the missionaries when they wrote the Relations previously alluded to, and wherein it is stated "that the village of departed souls was on the mountain

to the west,' and that 'the rocks were often found embellished with the paint with which they were wont to daub their faces.' Analagous inscriptions of the present time directly indicate that on these self-same rocks the Indian wrote the characters of his sign language, and otherwise embellished them. To-day these limestone slabs are literally covered with names painted and engraved by tourists and others on pleasure bent, who annually frequent this charming resort, and who have left a record of their visit by these embellishments on the rocks. It is frequently noticed that the pale face follows in the wake of his swarthy predecessor. On this village site two pioneers erected their dwellings and planted their orchards, and, on the site on the Nottawasaga River, a British fort was built during the war of 1812-13, indicating that the red man of the forest invariably selected the best site available in respect to natural adaptability. So likewise the whole environment at this point of the rock is such as would likely impress the savage mind with visions of the supernatural, where the departed braves would pass to the land of souls. If a Devil's Glen were a necessary adjunct to the 'village of departed souls,' to which allusion is made in Father Jones' report, there are two glens here, one on either side of the village, so that the ill-fated Petums, constantly harassed by the Iroquois, were always 'between the devil and the deep sea,' unless perchance they dwelt in blissful ignorance of their invisible foe, adhering only to the text that nature speaks.

"On the sides of the mountain, Prof. Coleman has found traces of the wave marks of a great inland sea, and, in ages remote, some mighty convulsion of nature upheaved the underlying rock strata, exposing great irregular walls and fissures. These rents and caves, now overgrown with rare ferns, moss, and creeping vines, furnish much interest to botanists. On the roof of the caves occur more recent petrifications, caused by water percolating through the fissures, and in some of the deep recesses are found perpetual ice and snow, tempering to icy coldness the streams of water that issue from subterranean caverns at either extremity of the rock, and ripple down the valley at both sides of the village, where, more than two centuries ago, resided Fathers Garreau and Grelon, who had left behind the vineyards of sunny France to slake their thirst from these two sparkling fountains, and labour for the cause they so faithfully represented.

"In times of war, these rocks, which rise to a total elevation of one thousand feet at the highest pinnacle of 'point Lookout,' would be admirably adapted for a fortress, and had these tribes exercised due vigilance and united their forces, they could hardly have been surprised, much less exterminated, as they subsequently were by their enemies.

"From an inspection of the ash heaps at this site, indications are found that fires of more than ordinary size were built here, as, directly on the brow of the mountain, one of those ash heaps is found covering an area of at least two hundred and fifty square feet, and the debris has accumulated to the almost incredible depth of four feet (Mr. Cook having built a root-house on one end of this ash bed, thereby ascertaining its depth). This is probably where the council fires of the tribe were built, and perhaps the feast of the dead was also held here. These fires could be distinctly seen from the villages of Huronia on the opposite shore of the Bay. Before this land could be brought under cultivation, Mr. Cook states that his uncle had to draw many loads of ashes from this pit, and used it to fertilize his garden, which enabled him to grow such excellent plants and vegetables that 'Tom' Smith was long known as *the* gardener of the district. This sheltered locality appears also to be specially adapted for orcharding, as directly east of the village,

further down the slope, is the old Creelman homestead, where, some years ago, President Creelman, of the Ontario Agricultural College, assisted in planting a fine apple orchard, adjoining which is the extensive plantation established by Doctor Aylsworth, the present occupant of the chair of this Institute.

"Mr. Cook at one time found a stone with a deer inscribed thereon, indicating the territory of the Deer tribe of the Petuns, where Fathers Garreau and Grelon were directed to labour, and where they founded the mission of St. Mathias.

"With the view of presenting for the first time a key to what I believe will ultimately unlock the hitherto sealed sites of the Petun villages in the combined missions of St. Mathias and St. Jean, which collectively were called the Mission of the Apostles, I append the following, from the Relations, Vol. XX, p. 9, 43: 'The Kionontateronons, called the "Nation of the Tobacco," are distant from the country of the Hurons, whose language they speak, about twelve or fifteen leagues to the west. The mission here has been the fifteenth of our missions, named the Mission of the Apostles. The lot for it fell to Father Chas. Garnier and Father Isaac Jogues—these are the villages they have encountered here: St. Pierre et St. Paul, St. Andre, St. Jacques, St. Thomas, St. Jean, (St. Jacques et St. Philippe), St. Barthelemy, St. Matthieu, (St. Simon et St. Jude).' Although the village of St. Mathias is not mentioned in this Relation, it is mentioned in Father Garnier's letter to his brother.

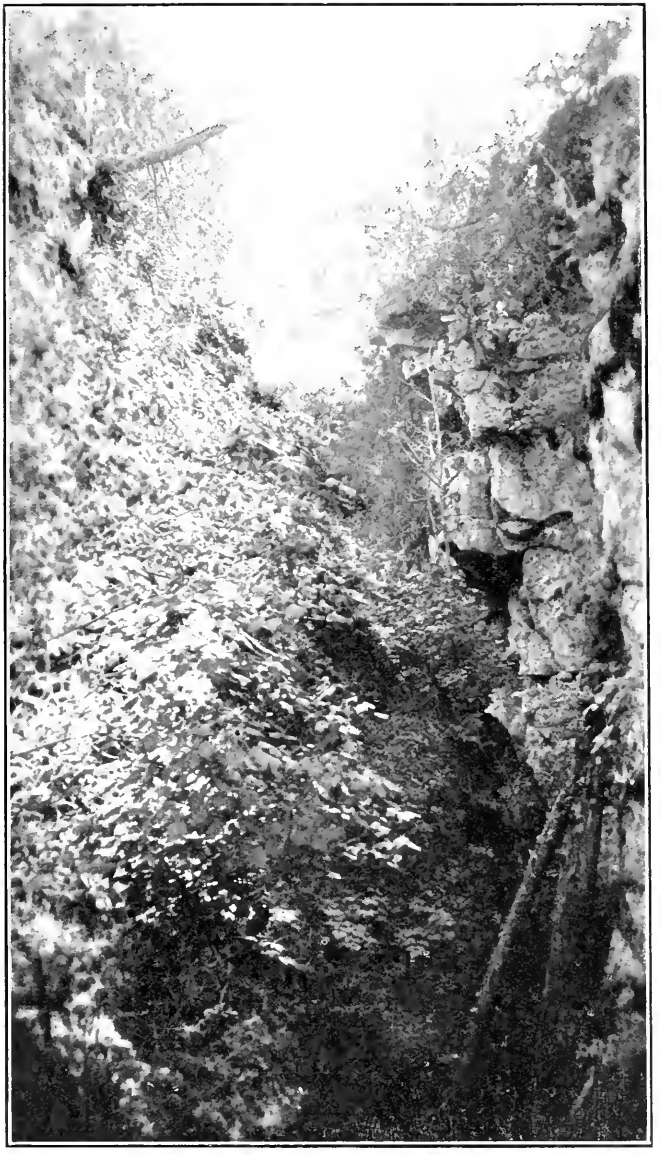
"From this it is plain that the towns here enumerated were all included in the 'Mission of the Apostles,' which was at a distance varying from thirty-six to forty-five miles from Huronia. That this mission did not claim to include the whole Petun country from Cape Hurd to the mouth of the Saugeen River (as inferred from Father Jones' report of 1902) may be gathered from Father Garnier's letter dated April 25, 1648: 'My Superiors have sent me with one of ours, named Father Garreau to a new mission in the Petun nation which we have called the "Mission of the Apostles."' In this there is nothing that would indicate that the 'Mission of the Apostles' comprised the whole Petun country, but simply a part which contained the towns herein mentioned, and which was at an average distance of about forty miles, this being the distance most frequently mentioned in alluding to the missions established in the mountains of the Petuns.

"It is obvious that if the 'Mission of the Apostles' extended to Cape Hurd on the west and the Saugeen River on the south, it would be an unreasonably extensive mission as a field for only two missionaries, especially when it is recorded that the missions of St. Mathias and St. Jean were only twelve miles apart, and that there were two missionaries in each of these.

"The inference conveyed from the foregoing appears to be that, previous to the 'Mission of the Apostles' being subdivided into the missions of St. Mathias and St. Jean, it was the field to which the labours of Fathers Garnier and Garreau were directed—the total extent from north to south being about thirty-five or forty miles.

"According to Decreau's map of 1640, the town of St. Pierre et St. Paul appears as the most southerly in the mission, and was at this date also the most important town. The only other town shown on this map is St. Simon et St. Jude, which is situated on a small bay, and is the furthest to the north. Rev. A. E. Jones, S.J., in his report, has located this town away from the Mission of the Apostles altogether, and placed it on a small bay in St. Edmund township, county of Bruce, near Cape Hurd. It is apparent that it would harmonize much better with the 'Relations' to restore this outstanding town to its former old-time associations, and locate it on

the small bay at Craigleith, where the writer visited, in the spring of 1906, on the Martin farm, a village site on a beautiful sandy plateau overlooking the lake, two rings being found here bearing the initials 'I. H. S.' The identification of this northern town as St. Simon et St. Jude appears to receive confirmation from M·



THE CAVES, HANEY FARM, CON. 2, COLLINGWOOD TP.

A. F. Hunter's notes on the 'Relations,' Vol. XX, p. 301. He says: 'It is doubtful if any of the nine villages were outside of Nottawasaga township. In Sanson's map of 1656, St. Simon et St. Jude appears on the extreme north end of the map.' Although the force of Mr. Hunter's opinion is evident, it must be remembered that this 'Nation of the Tobacco' (particularly that portion included in the Mission

of the Apostles), invariably adhered to the mountain, consequently, the two most northern towns, viz., St. Mathias and St. Simon et St. Jude, are found beyond the county line, and in Collingwood township. It is further stated in these notes that it is supposed the missionaries placed the villages in rotation, beginning with the first mentioned, and, following to the north, as in Sanson's map, the village of St. Simon et St. Jude will thus be at the extreme north end.

"Taking the Craigleith village as a starting point, and following the mountain range inland, there is no difficulty in at once locating Ekarenniondi (St. Mathias), and it is, if possible, less difficult in observing its 'natural adaptability' for the purpose for which it was set apart by the Indians. Continuing southward along the slope, we come in contact with a complete chain of village sites continuing to the southern limit of Nottawasaga township, where there is a large site on the Flack and Latimer farms near Banda.

"The localities represented in this Blue Mountain chain of villages are as follows: Craigleith, 'The Caves,' MacMurchy's, Pretty River, Back Settlement, Duntroon, Glen Huron, Creemore, Banda. The question will now be asked, where is the town of St. Jean, the headquarters of the southmost mission? Father Garnier says 'twelve miles distant,' which would bring us to the extensive site in the vicinity of Duntroon, passing St. Barthelemy and St. Phillippe et St. Jacques on the way.

"Another reason for identifying the Duntroon site as St. Jean, instead of the site at Creemore, which possesses some features commending its consideration, is that the Iroquois, after having dealt their final blow to the village, would retreat eastward to the locality of Stayner, and near enough to the mouth of the Nottawasaga River to be heard by Father Chabanel's fleeing party, who had come to a halt at this, the only unfordable stream, and who heard the war whoops of the returning warriors; whereas, if St. Jean were at Creemore, the next most probable site, (on account of the quantity of burned corn found here), the Iroquois would be too far away to the south to be heard, especially as Father Chabanel's road must necessarily have been a good distance to the north, as he passed by the northern mission of St. Mathias that same day."

PREAMBLE.

In the National Geographic Magazine for February, 1916, there appeared a masterly review of Henry Fairfield Osborn's book, "Men of the Old Stone Age," by Colonel Theodore Roosevelt. While the Colonel does not absolutely accept all the hypothe es of Professor Osborn's book, still he leads us to infer that he is in intimate sympathy with many of the theories advanced in "Men of the Old Stone Age." Professor Osborn has enlarged upon, and elaborately developed, Darwin's hypothesis of the descent of man from an ape. But he nowhere undertakes to account for the evolution of the ape. We do not believe that the Professor would care to trace his ancestors back to a sea shell, as did Darwin's grandfather, whose family seal carried the legend: "Omnia ex conchis—everything from a clam shell."

The author of "Men of the Old Stone Age" throws back the first appearance of man-as-man into the mystic twilight of an unknown past, hundreds of thousands of years before Usher's biblical time, "when the earth was void and empty and the spirit of God moved over the waters." Professor Osborn gives to us no startling information on man's origin beyond what was already known to European and American palæontologists. What he does do, however, and does well, is to clothe the theories, hypotheses and suppositions of the Darwinian school in a new and fascinatingly attractive dress which appeals to the imagination, if not to the judgment, of his thoughtful readers. The wonderful self-deception and the amazing skill which many, who are called scientists, exhibit in their efforts to destroy all belief in the supernatural surpasses, like the peace of the Lord, all understanding of man. What is the solution of this mysterious problem? Is it, as Ruskin tells us, because:—

"In general all false reasoning comes from men having some false notion in their hearts with which they are resolved that their reasoning shall comply."

To place Faith and Science in a state of perpetual collision, by which Faith is corrupted, spoiled and laid waste, and Science separated from it seems, as Shlegel in his "History of Literature" contends, to be the avowed intent of modern scientists. By this manifold and hostile separation belief in the Supernatural is leaving our homes, and the restraining influence of Faith, Hope and Charity, in their vital action on the moral conduct of the masses, is disappearing.

The epilogue of most of the scientific contributions to the discussion on the origin of man fully justifies Newman's assertion that "to-day mistiness is the mother of wisdom." To qualify as an accredited writer of "popular science" you must be large in statement, broad in outlook, vague in deduction, and mystic in diction. The theory put forth by Prof. Osborn, and tentatively endorsed by Col.

Roosevelt, was, some years ago, supported officially in his Archæological Report, by the Superintendent of the Archæological Department of the Board of Education for Ontario.

In the Archæological Report for 1895 appeared an article entitled, "Notes on Primitive Man," written by the late Dr. David Boyle. In his essay Dr. Boyle's sympathies and predilections led him to support the Darwinian doctrine of man's descent from a beast. He gave particular prominence in his "Notes" to this avowal from Darwin's "Descent of Man," "Our progenitors diverged from the Catarhine (Monkey) stock of the anthropoids." In a foot-note the doctor informs us that: "Cope renders it probable that the ape ancestor of man lived in North America. The anaptomorphus was a lemur rather than a monkey, and had a dentition very human in character." The trouble with Cope and many like him is that they suffer from what logicians call "Petitio principii"—assuming for granted the very thing to be proved.

Logically, the doctor also assumed that the first man and woman, when they shed their brute skins, were hairy, half-naked things, steeped in the lowest savagery. If permitted to pass unchallenged, these contentions would threaten the foundations of Christianity, would destroy all belief in the inspiration of the Mosaic writings, and, by implication, would make the Minister of Education of the year of the publication of the report, a party to a conspiracy to undermine Christian faith and imperil all belief in the supernatural. As Dr. Boyle's paper on Primitive Man appeared in a Government Report it is in the interest of impartiality that a rejoinder or refutation of the Doctor's views is published in this "Report."

The elucidation and acceptance of all truth, come from whom it may, is as imperative as a command of God. There can be no serious conflict between real science and Christianity.

Were it possible to prove Dr. Boyle's theory of evolution—and that it is more than a theory cannot be claimed for it by its staunchest advocates—and trace back man's origin to an ape, still the act of converting the beast into a man would be an act of creation, and one of infinite love, power and goodness.

Man is a being possessed of spiritual, intellectual and moral attributes, and as no living thing can give to another that which it has not itself, no animal could give to man an immortal soul or a reasoning mind. Science has not proved, and in all likelihood never will prove, that upon the earth there was or is any being with capacity to evolve thought or think rationally, save man alone.

What is called modern science, or science in an absolute manner as opposed to Christian tradition, is really nothing but hypothesis piled on hypothesis.

If pious Darwinians are shocked at our blasphemous temerity in challenging the plenary infallibility of the "Origin of Species," we Christians contend that we have the same right to disbelieve evolution as they have to disbelieve the Bible. We are free men, and we have the same right to be agnostics as to their biology as they have to be agnostics about our Christianity.

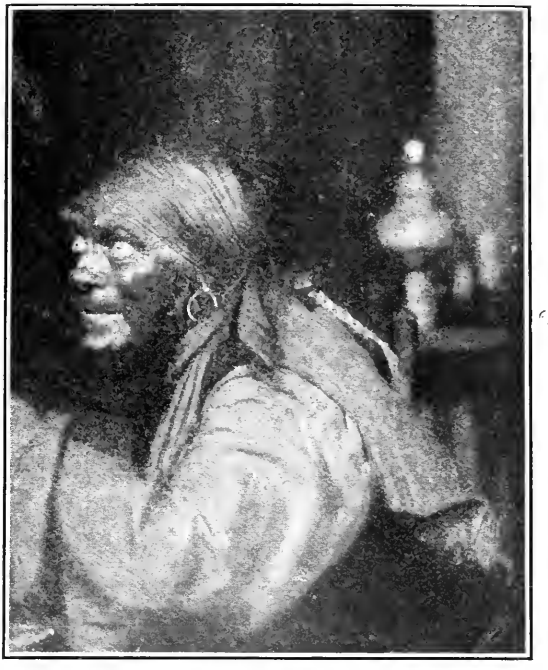
Reviewing the Past.

Sixty years ago the intellectual world was divided into great hostile camps battling over the origin of man, the evolution of the species, and primeval man. Captained by such formidable leaders as Charles Darwin (1), Sir John Lubbock (2), John Tyndall (3), and Herbert Spencer (4), the evolutionists carried consternation to the Christian camp and threatened the permanency of the Christian religion.

(1) "Origin of Species by means of Natural Selections."
"Descent of man and selection in relation to sex."
(2) "Origin of civilization and the primitive condition of man."
(3) "Inaugural Address before the British Association."
(4) "First Principles of the New System of Philosophy."

The Christian cohorts marshalled under the leadership of St. George Mivart (5), Lord Arundell of Wardour (6), The Duke of Argyle (7), Orestes Brownson (8), and Cardinal Wiseman (9), defended the entrenchments of Christianity.

(5) "On the Genesis of Species."
(6) "Tradition; with reference to Mythology and the Law of Nations."
(7) "The Primeval Man; an examination of some recent speculations."
(8) "Darwin's Descent of Man."
(9) "Connection between Science and Revealed Religion."



A Modern Ape Man.
(Drawn from life by W. Thompson)

The comparative weakness of the forces now aligned against the Christian religion and the exhaustion of high explosives, at one time in possession of the invaders on orthodox territory, is a propitious augury that the war between the evolutionists and the defenders of revelation is, like all wars of long duration, approaching a final issue.

Those among us who, in other days, worshipped Kant, Haeckel, Fichte, Nietzche and Bernhardi as supermen, now realize that we were bowing to men of clay, whose creeds led to the logical results of Teutonic barbarities in Belgium and to contempt for written contracts. These were they who opposed all national morality, decency and clean living, but we were too blind to perceive the indecency of the paintings in our admiration of the colours and the execution.*

* Appendix, Note 1.

The most honoured and praised of the scientists of England and France in the last century, by public repute, were the Huxleys, the Tyndalls, Lyells, Lubbocks, Darwins, Spencers; the Conteans and the Cosmists or Evolutionists, men who might make a Lamarck, a La Mettrie, or even a Cabanis—who defined man to be "a digestive tube open at both ends"— die of envy.

In France they were anticipated by Voltaire, Holbach, D'Alambert, and the two Rousseaus, who hastened, if they did not bring on, the French Revolution, and who, under cover of the honourable names of philosophy, progress and liberty, partially succeeded in sapping the very foundations of religion, morality, civilization, and even of society itself. In the writings of these men were concealed the germs of social and religious ruin; out of them arose the rockets of free thought, scepticism, agnosticism and atheism. These men threw religion into the discard of old and useless things and, incidentally, cleared the stage for David Hume and his school of English-speaking naturalists. Tiring with Hume and Bolingbroke, many restless spirits fawned on the positivist Compte, and in time, becoming disgusted with his frigid, naturalistic creed, they turned and worshipped Herbert Spencer, founder of the school of practical evolution. His agnostic reign continues in some form to-day, though signs are not wanting that it is nearing its end.

The talents and ingenuity of many of these writers were marvellous, and any religion which could survive their attacks and continue to flourish, must be superhuman, and need fear no future foes, for the future is not likely to furnish abler men or to devise a more consummate strategy.

Theory of Evolution.

Until we read Professor George Grant McCurdy's pamphlet on "Ancestor Hunting," we had thought that among men of high intellectual attainments the controversy now waged for sixty years on the descent of man was at an end. The learned Professor assures us we shall have to go "a long way back in the past to find the parting of the ways between the ancestor of man and that of his nearest of kin among the apes . . . the evolution of the human brain from simian type involves a tripling of the superficial area of the cerebral cortex."

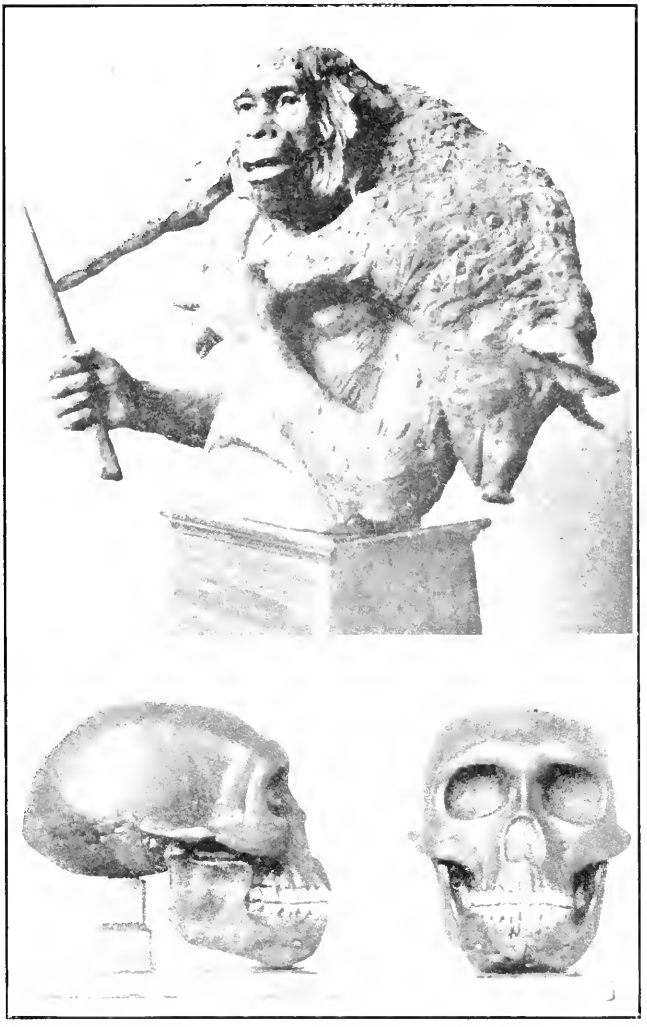
Prof. Scott Elliott, while not taking issue with Grant McCurdy, hesitates to follow the origin of man back to a beast and confesses his inability to account for his original birth. He writes: "Although we have an opinion that all animals may possess germs of mentality and morality, it will be seen that for this sudden change (from irrational to rational) and status no real explanation has been offered." Further on he adds: "In the oldest and most widely read of all books an answer can be found to satisfy those difficulties which arise from the present condition of science and of man himself." *

And now enters Mr. Edward Clood, who assures us on the faith of a gentleman and a scholar that: "Without doubt the influence of the conclusions deducible from the theory of evolution is fatal to belief in the supernatural." ("Pioneers of Evolution," Watts & Company, London.) The evolution on which these gentlemen lay stress is, of course, the evolution of the Ape-Man. This evolution is either an innocent scientific description of how man and certain earthly things originated, and if it be anything more than this, it is an astute attack on thought itself. It means that a positive thing called an ape with a perishable soul turned in millions of years into a perishable thing called a man, with a rational, if not an immortal, soul.

*"Prehistoric Man and His Story," 1915. Seeley & Co., London, E.

The capture of Constantinople alone sufficed to crush the spirit of ancient Greece, and the genius of the Romans was destroyed by the Goth. It remained for the evolutionists to extinguish the immortality of the soul by confusing the attributes of thought and action in man, with the impulse and instinct in the brute.

With the Chaldeans, Egyptians, Greeks and Syrians, or with those who came before the Phœnicians into the basin of the Mediterranean, they assume that soul



THE HEIDELBERG MAN WITH FALSE CHIN ATTACHED.
Drawn by M. Masere.

and life are one. As at one time in the history of our race, all thoughts and theories were judged by whether they tended to make a man lose his soul, so to-day all modern scientific thoughts and theories may be judged by whether they make a man lose his wits.

The more of these books we read the more we are convinced of the truth of the words of the distinguished entomologist, Dr. Wasmann: "The higher we ascend in

the systematic categories, and the more closely we approach the chief types of the animal world, the scantier becomes the evidence; in fact, it fails so completely that we are finally forced to acknowledge that the assumption of a monophyletic cell and the evolution from it of the whole animal kingdom of organic life is a delightful dream without any scientific support."

Statement of the Case.

It is self-evident that any theory of evolution that contradicts creation and denies the immortality of the human soul is directly opposed to Revelation, and therefore to Christian truth. Though evolution in some form goes back to Thales and Anaximander it was not till 1809 that it became a science, when Lamarck wrote his "Philosophie Zoologique," and became the parent of modern evolutionary law. He contended that environment and conditions tended to develop and alter the habits and impulses and even the organs of animals. These changes in animal structure were transmitted to their offspring. He was ably supported by Geoffrey Saint Hilaire, who preached the doctrine of the mutability of species and embryotic change. In 1858 Alfred Russell Wallace and Charles Darwin originated a new system of evolution which they called the Law of Natural Selection. The following year, 1859, Darwin published his "Origin of Species," which fell as an explosive shell in the Christian camp. He fearlessly proclaimed that man himself was the result of natural selection, and was but a higher type of animal produced by a long series of transformations; that, in reality, he was a developed brute with a superior intelligence. In his letter to Sir Charles Lyell he says: "Our ancestor was an animal which breathed water, had a swim bladder, a great swimming tail, an imperfect skull, and undoubtedly was an hermaphrodite." He failed to state, however, when and how animal instinct became human intelligence, or wherein the spiritual soul of man differs essentially from the soul of a brute. The favourable reception accorded by many advanced thinkers, and particularly by young and enthusiastic students of the theories advanced in Darwin's "Origin of Species," did more to imperil the faith of orthodox believers in human intelligence, as distinct from animal instinct, than did all the arguments and examples adduced by the scientist himself. Such was the popularity and influence of Darwin's writings that no refutation of his arguments, however conclusive, met with a favourable reception, and for years nearly all scientific works, romances and novels were punctuated with the Darwinian phrases: "The missing link," "Natural selection," "Survival of the fittest," "Struggle for existence," "The weak to the wall," and similar epigrammatic sayings.

While evolution in some form will possibly remain a permanency, the theory of the derivation of man from the ape or from any other animal, is buried beyond the hope of resurrection.

Alfred Russell Wallace, whose system of evolution was in accord with that of Darwin, and who, conjointly with him, read, on the same day, a paper on the subject before the Linnaean Society, London, refused to go back to an ape-man. He contended for the divine origin of man and the spirituality of the human soul, saying that man was an exception to the laws of natural selection, and that God guided the development of man in a definite direction and for some special purpose. Thomas Carlyle considered Darwin's ape-man an absurdity.*

*Appendix. Note 2.

The Ape-Man.

We will dismiss the argument of the physical resemblance in the structure of the ape and of man by a citation from the great Bunuller, who, in his erudite book, "Man or Ape," says: "The testimony of comparative anatomy is decidedly against the theory of man's descent from the ape" (p. 59).

If it be permissible to argue from resemblance to descent, we have the same right to assert that the ape is a degenerate man, as they to assume that man is but a higher type of the ape. Moreover, where, in caves or museums, may be found the remains of the animal bridging the chasm between the brute ape and the fully developed man? Though the existing forms of animal life have been studied and all fossil remains carefully examined, that which is popularly called the "missing link" has not been found. When Mr. Darwin was confronted with this problem he adroitly evaded it by assuming that the proofs of a missing link were probably buried in submerged continents, adding: "This manner of treating the question diminishes the difficulties considerably, if it does not cause them to disappear entirely." His disciple, Professor Heath, undeterred by the vagueness of his master's adroit evasion of the difficulty, assures us when writing of the anthropitheque (ape-man): "It is known that there were anthropoid apes; it is knowable that they gasped after articulation, and those who attained to it (*i.e.*, speech) are Aryans, whether of Asia, or of the submerged continent of Atlantis."

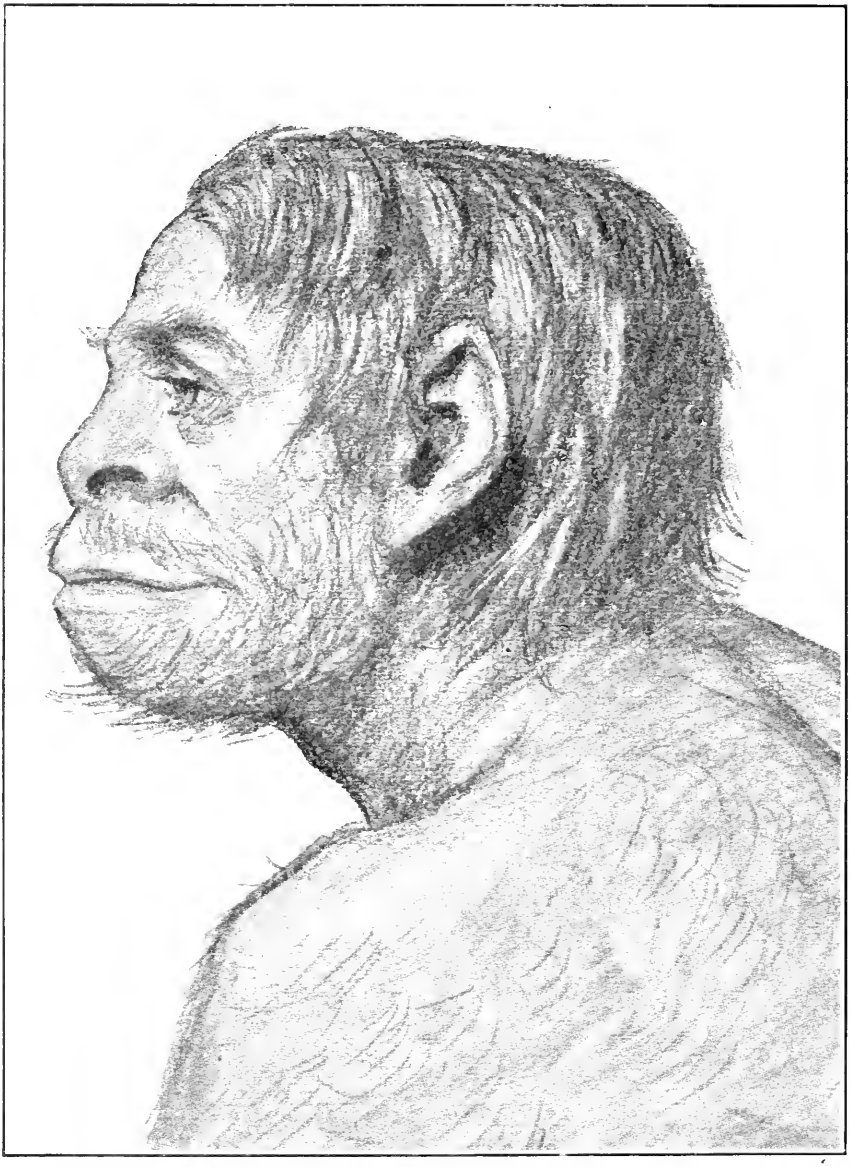
Mr. John Murray, who is an authority on oceanic subjects, writes: "He is a bold man who still argues that in tertiary times there was a large area of continental land in the Pacific, that there was once a Lemuria in the Indian Ocean, or a continental Atlantis in the Atlantic."

The distinguished scientist, Rudolf Virchow, in the Congress of Anthropologists assembled at Vienna in 1889, bears his testimony against the possibility of the existence of the Ape-Man: "We have sought in vain," he declared, "the missing links that are supposed to connect man with the ape. The primeval man, the genuine *pranthropes*, has not yet been found."

At Innsbruck, in 1869, scientists, in the fever heat of discussion, believed that they could trace the evolution of the ape into the man; to-day we are unable to trace the derivation of one race of men from another. No race of men has yet been discovered which can be designated as apish or half-apish. . . . It can be clearly shown that in the course of five thousand years no appreciable change of type has taken place. In Virchow's tract on "The Liberty of Science," we read: "But I must say that no skull of ape or ape-man which could have had a human possessor has ever yet been found. . . . We cannot teach, nor can we regard as one of the results of human research, the doctrine that man is descended from the ape or from any other animal."

At the Congress of Naturalists and Physicians assembled at Wiesbaden, Prussia, Virchow delivered the inaugural address which dealt with the progress of biology and anthropolgy. Treating under its double vision prehistoric and historic man from the aspect of developed anthropology, he expounded at considerable length the theories now held by advanced thinkers. It may be of interest to mention that anthropology, which treats of man in his natural groups and formation, involves the study of all human characteristics, physical, pathological, physiological, and also his moral, social and political aptitudes. Virchow claimed that, as regards prehistoric anthropology: "Every positive advance which we made in that study had removed us further than before from any proof of evolution to be found there. Man has not descended from the ape, nor has any ape-man existed." Then, as to

savage man, he asserted that "the Australian bushman, who is probably the lowest and most imperfect type of men extant, is nowise ape-like, but entirely human like ourselves." Finally, adverting to the biological subject of the transformation of



THE SPURIOUS APE MAN, PILTDOWN, WITH CHIMPANSEE JAW FITTED TO HUMAN SKULL. Drawn by J. Cooke.

species, he affirmed that it is not yet possible to produce any certain proofs of man's tertiary origin in the world. The biologist, Prof. Zittel, referring to recent discoveries of human remains found in old caves, comments as follows: "Such material as this throws no light upon the question of race and descent. All the human

bones of determinable age that have come down to us from the European Diluvium, as well as all the skulls discovered in caves, are identified by their size, shape and capacity as belonging to the *homosapiens* (man). They do not by any means fill up the gap between man and the ape."—"Outlines of Paleontology," p. 37.

The eminent paleontologist, Dr. Bunmuller, ridicules the possibility of a prehistoric ape-man and proves to a demonstration his non-existence at any epoch or age on the earth. "On no recognized principle of classification can man be associated with the ape; for, to say nothing of his gifts of understanding and speech, he stands quite alone by reason of the vastly superior development of the brain portion of his nervous system, and hence can lay claim to an independent position in the animal kingdom. Neither is his descent from an ape attested by science, for as yet no connecting link has been discovered, neither in the higher walks of apedom or in the lower walks of humanity. Even the possibility of a connection link is disproved by the tendency of apes and half-apes in the course of their higher development in anatomical structure, to diverge more and more from the human type, and is contradicted by the testimony of paleontology (the science dealing with remains of extinct species of animals preserved in clay or rock). Such is the present state of scientific knowledge; and its results are in harmony with the view which the human understanding, lay and professional, has ever entertained when not under the tyranny of theories that happen to be the fashion of the hour." *

When Cardinal Manning in 1862 declared Darwin's theory of the descent of man to be a "brutal philosophy—to wit, there is no God, and the ape is our Adam," Huxley called him "a great man with a superstitious mind." Now, after a lapse of sixty years, Protestant and Catholic scientists and philosophers are unanimous in declaring that the evolutionary theory as applied to man was "an attempt to dethrone God and to do away with all idea of God."

THE DAWN MAN—THE MISSING LINK.

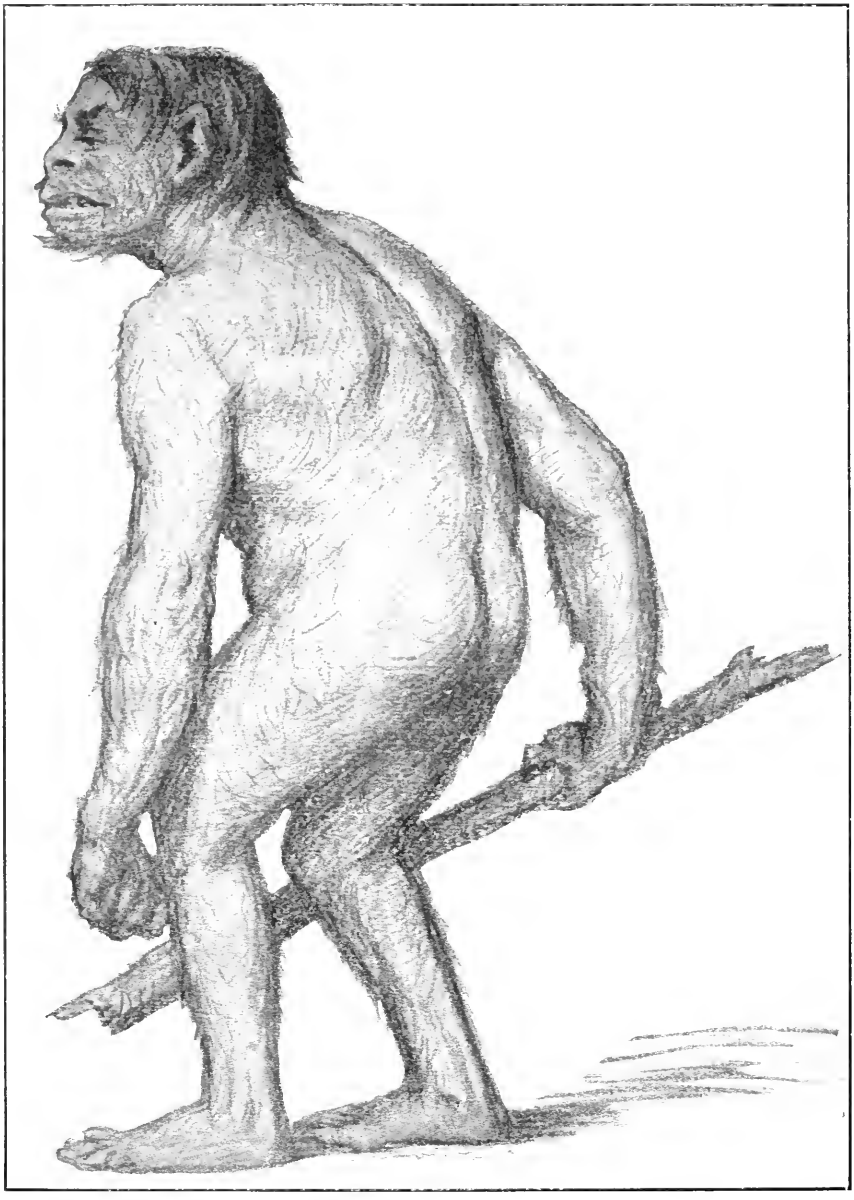
The supporters of the law of evolution have for sixty years searched the five continents in quest of a fossil or petrifaction of an animal intermediary between man and ape.

In 1911, Professors Charles Dawson and Smith Woodward unearthed at Piltdown, Sussex, England, a human skull, which was said to belong to Pliocene times. Further search in the bottom of the gravel pit revealed the right half of a jaw. The gravel bed, at the bottom of which the skull and jaw were found, held fossil remains which manifestly were washed in by streams in Pliocene times; these included scattered bones of a mastodon, a hippopotamus, a southern mammoth and a tooth of a primitive elephant.

There was no doubt that the Piltdown remains were very old and belonged to a period antedating the paleolithic age. The discovery of the skull and jaw bone created among scientists an interest greater than that aroused by the finding of the Java man, or Heidelberg man of the "river drift" races. Some of the popular anthropologists of Great Britain, notably Elliot Smith, Arthur Keith and Arthur Smith Woodward, contended that the ape-like jaw and human skull belonged to the same head, and that this type of man with a smooth forehead and ape-like jaw represented a new genus—an *Eoanthropus*, or dawn man. "Elliot Smith," writes Henry Fairfield Osborn, "concluded that members of the Piltdown race might well have been the direct ancestors of the existing species of man, thus affording a direct link with undiscovered tertiary apes."—(Men of the Old Stone Age—p. 142.)

*"Man or Ape," p. 91.

Now began great rejoicing in the Darwinian camp, for, at last, the missing link was found. Drawings of the Piltdown man with ape jaw appeared in scientific journals and publications; magazines and newspapers exploited him, and university professors once again reverently spoke of the "myths of the Bible." Readers of



THE "DAWN MAN." Drawn from imagination by J. Cooke.

the *Scientific American* cannot have forgotten an article which appeared in its issue of January 30th, 1915, written by Prof. W. D. Pycroft, British Museum, London. His paper was overwritten, "The Direct Ancestor of Modern Man and What He Looked Like," and was a feeble effort to revive interest in the Darwinian

Ape-Man. A glance at Prof. Pycecroft's "Primitive Man" will show that he is a weird creation of the artist's brain. The long arms, the prehensile and splay-feet, the hairy pelt, the Hercules' club and prognathous jaw are all amusing if not edifying. From a fragment of an old cranium, two molar teeth, and the jaw of a beast—all which were found in the Piltdown pit—the learned professor reconstructed his exhibit No. 1. From the same remains a Professor of the Chicago University built up a missing link. This is what he exultantly wrote: "Competent paleontologists and anthropologists to-day believe it (skull, Chimpansee jaw and molar teeth) to be a real connecting link between man and the lower ape-like animals." Is it any wonder that men now talk about the bankruptcy of science. A bankrupt is a man who cannot make good the credits given him.

Who the "competent" men referred to by the Chicago professor are we do not know, but we do know that Branco, Klaatsch, Ranke, Hertwig, Maenamara, Schwalbe, Keith, and others have proved that Dawson's reconstructed man is an imposition and a fraud.*

While the skull, with the jaw attached, was on exhibition in London, the distinguished anatomist, Dr. E. Walerston, addressing the members of the Geological Society of London, December 11th, 1912, said: "It is anatomically impossible for the two specimens, cranium and jaw, to belong to the same person." In his article on the "Piltdown Man" contributed to *Nature* he wrote: "To refer the mandible and cranium to the same individual would be equivalent to articulating a chimpansee foot with a human thigh and leg." Professor George Grant MacCurdy, of Yale University, writing in the February, 1916, number of *Science*, maintains that the French and Italian anthropologists rejected the "missing link" find at the time of the discovery and laughed out of court Dawson's and Woodward's "dawn-man."

Professor H. F. Osborn, who, in the first edition of his voluminous work, was disposed favourably towards the Piltdown man, "whom we are inclined to regard as a side branch of the human family," admits in his second edition—page 512—that the skull and mandible did not belong to the same person.† From which we conclude with Virchow that: "When people see a doctrine which has been exhibited to them as certain, established, positive, and claiming universal acceptance, proved to be faulty in its very foundations or discovered to be faulty in its essentials and chief tendencies, many lose faith in science. Then they break forth into reproaches at the scientists:

"Ah! you yourselves are not quite sure. Your doctrine which you call truth to-day is to-morrow a lie. How can you demand that your teachings form the subject of education and be a recognized part of our general knowledge?"

What is known as the Neanderthal race has bequeathed to us the oldest fossil remains of man found anywhere upon earth. The skull, according to measurements given by Prof. Scott Elliot, does not differ measurably from some Australian types still living, and in cranial capacity it surpasses that of many of the Indo-Aryan race. When, after a study of the skeletal remains of palaeanthrope races, Stratz maintained the theory that, "Man is not a descendant of an ape, but is a cousin to him; that man and monkey are two separate and distinct species sprung from a common parent," Ranke answered that "Such a hypothesis is purely a matter of imagination." "Thus it frequently happens," remarks that distinguished Monist, Professor Schwalbe, "that views based on a few facts have been regarded as

*Appendix, Note III.
†See Appendix, Note IV.

definitely obtained scientific results by those who have not studied the matter closely, because these views have been enunciated with peculiar assurance." So the Piltdown skull and the Moi race of men with tails are buried with no hope of a resurrection.

"The Moi race?" Yes.

In 1896 M. Paul d'Enjoy returned to Paris from the Indo-Chinese region and said that he had met and spoken with members of a Moi race of men who had tails, and ankle-bones which resembled the spurs of a cock, and could climb and live in trees like monkeys. Scientific and fashionable Paris went into ecstasies, for, at last, the link uniting man and brute was found. M. de le Cour, however, proved M. Paul d'Enjoy to be a *farceur*, and his Moi men to exist only in Paul's imagination. We cannot but admire the patience, zeal and industry which these men devote to the study of man's origin. The discoveries they make and the scientific truths they unfold cannot conflict with the truths of revelation, for universal truth is but from the immortal and cannot contradict itself. If error is, at times, mistaken for truth, the scientists of the future will, themselves, detect and extrude it.

When fossil remains of the ape-man are found, then the supporters of the Darwinian theory will have some substantial foundation on which to construct their arguments. If these fossils of the ape-man exist they cannot escape discovery. Until this discovery is made the Darwinian claim is outlawed and cannot be considered as even a serious scientific hypothesis.

When the speculative accretions which have been added to the discoveries of the scientists are removed, it will be found that these discoveries do not and cannot affect the validity of the Mosaic account of the origin of man. There is no conflict between scientific or physical truth and revelation: the war is between the spirit of unbelief and a living and active Christianity.

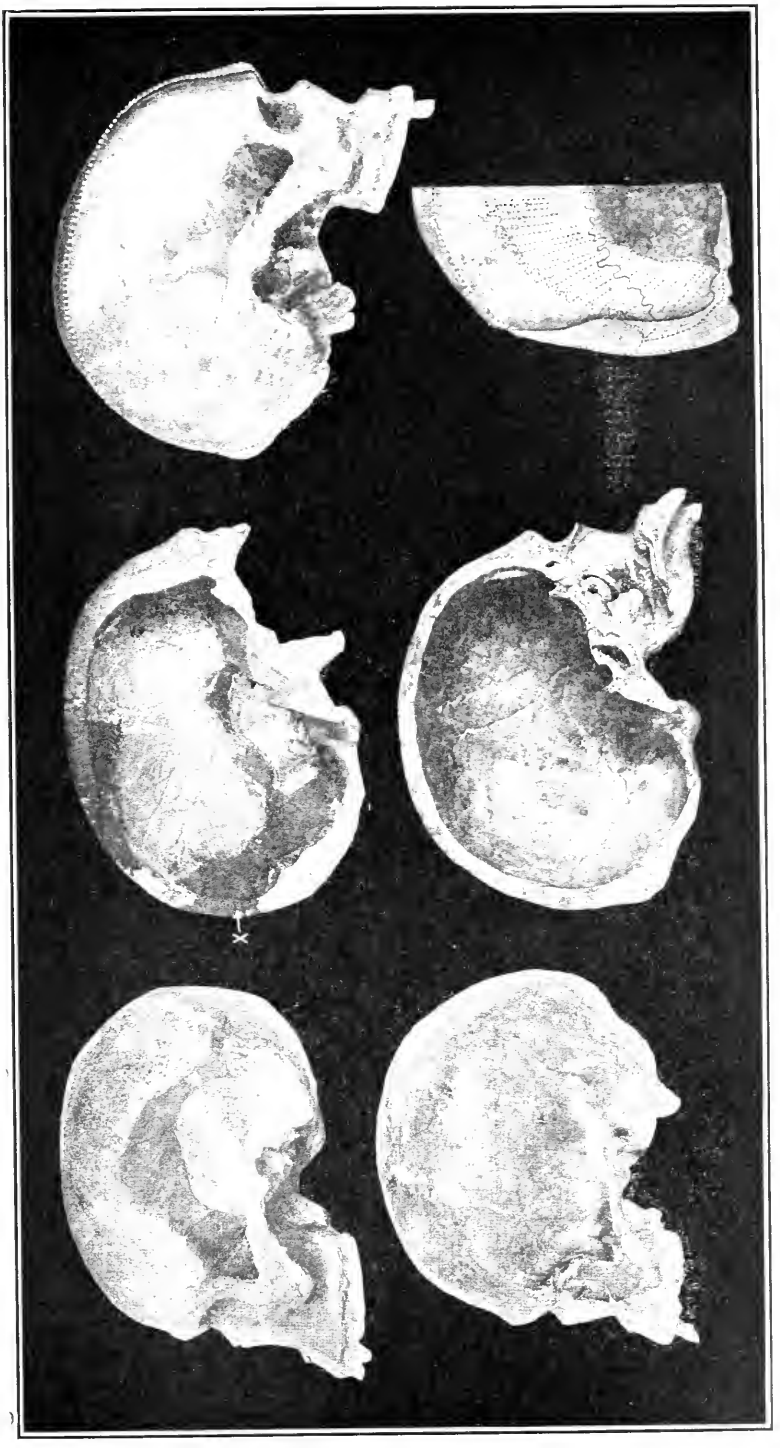
APPENDIX

NOTE I.

That he might triumphantly support his theory of Evolution, Haeckel, the German zoologist, has repeatedly distorted facts to adjust them to his theories. As a scientist, he has disqualified himself. In his books on the descendance of man in relation with his monistic religion, Haeckel simply falsified well-known photographs of embryos and even invented some of them. Haeckel himself was driven to admit that he had *modified* some of the pictures he published, but not more than seven or eight per hundred. "Anybody interested in the matter," writes Jules Duesberg, of the Carnegie Institute, Washington, should read the exceedingly sharp criticism of Haeckel's methods published by Dr. F. Kiebel, Professor of Anatomy at the University of Strassburg, and approved by the most prominent German anatomists and zoologist. "Haeckel sees things as he wants them to be."

NOTE II.

Writing to the *Daily Tribune*, London, November 4, 1876, Thomas Carlyle says, "So-called literary and scientific classes in England now proudly give themselves to protoplasm, origin of species and the like, to prove that God did not build the universe; I have known three generations of the Darwins—grandfather, father and son—atheists all. The brother of the famous naturalist, a queer man who lives not far from here, told me that among his grandfather's effects he found a seal engraven with this legend: "Omnia ex conchis" (everything from a clam shell!). I saw the naturalist not many months ago; told him I had read his "Origin of Species" and other books; that he had by no means satisfied me that men were descended from monkeys, but had gone so far persuading me that he and his so-called scientific brethren had brought the present generation of Englishman very near to monkeys. A good sort is this Darwin, and well-meaning but very little intellect. Ah! it is a sad and terrible thing to see nigh a whole generation of men and women professing to be cultivated, looking around in purblind fashion and finding no God in this universe. I suppose it is a reaction from the reign of cant and hollow pretense, professing to believe what in fact they



PILTDOWN SKULL AND THAT OF AN AUSTRALIAN BUSHMAN.
Upper row, Piltdown. Lower row, Bushman. *Scientific American*, January 30th, 1915.

do not, and this is what we have got; all things from frog spawn; the gospel of dirt the order of the day. The older I grow—and I now stand on the brink of eternity—the more comes back to me the sentence in the Catechism which I learned when a child, and the fuller and deeper its meaning becomes:

"'What is the great end of man? To glorify God and enjoy Him for ever!' No gospel of dirt, teaching that men have descended from frogs through monkeys can ever set that aside."

NOTE III.

THE PILTDOWN MAN.

"Doubts which have been entertained from the first by many anatomists as to the association of the Piltdown jaw with the Piltdown skull appear to be entirely confirmed by the recent exhaustive comparative study made by Jerrit S. Miller, Jr., of the United States National Museum. He has shown that those portions of the Piltdown jaw preserved, including the upper eye-tooth are generically identical with those of an adult chimpanzee.

This conclusion, which has been accepted by several eminent comparative anatomists, has two very interesting results; first, it deprives the Piltdown specimen of its jaw and compels us to refer the skull to the genus Homo (man) rather than to the supposed more ancient genus Eoanthropus (half man—half ape—dawn man); second, it demonstrates the presence of anthropoid apes in Europe during the glacial epoch."

"Men of the Old Stone Age." Second Edition. March, 1916.

NOTE IV.

THE PILTDOWN FREAK.

Notwithstanding positive proofs showing that the Chimpanzee jaw did not belong to the skull, this primitive and ape-like monstrosity was brought from London, England, and placed on view in the anthropological department of the San Diego Exhibition, Southern California.

Thousands of visitors to the Exhibition saw this restoration of the Piltdown head and were informed by card and curator that it was the Eoanthropus Dawsoni or Dawn-man—Darwin's Missing Link. Without doubt the official who carded the exhibit and the curator himself knew nothing of the imposition staged for the public. Possibly Professors Dawson and Woodward are still unconvinced, for scientists who begin with a hypothesis insist upon seeing everything in the light of that hypothesis.

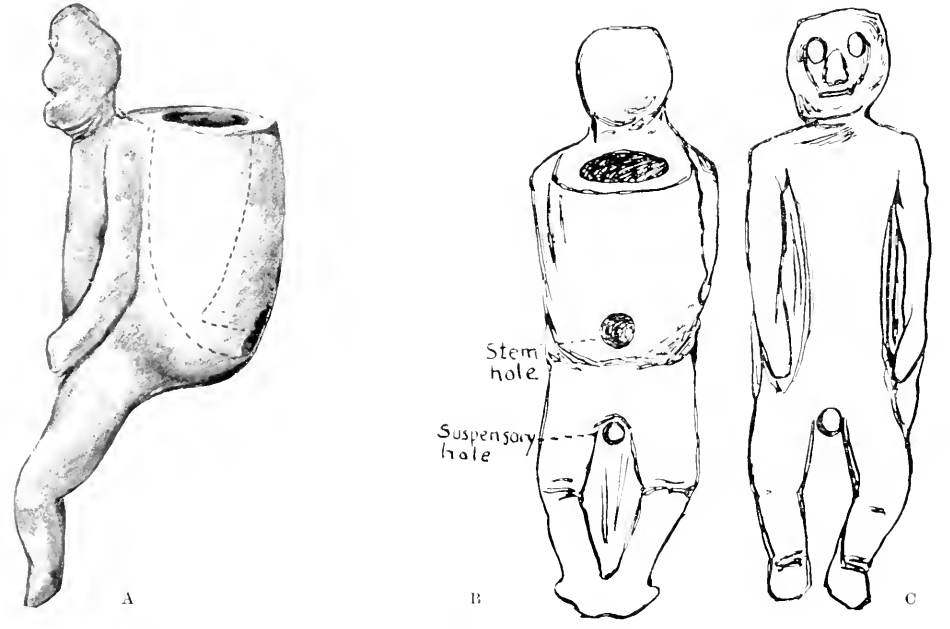
Ontario Effigy Pipes in Stone

By Col. G. E. Laidlaw.

Fifth Paper.

In the present article, the Reports and Reprints are those of the Provincial Museum, Toronto, issued by the Department of Education. The museum numbers are those of the same museum: the weights, avoirdupois, and the measurements inches, except where otherwise stated. The writer has been fortunate to bring to notice and thus place on record a new type of human effigy pipe, Ontario, which came to his notice this summer.

No. 1.—Human figure pipe, found by W. Foster, on village site No. 23, S. ½ Lot. 12, Con. 1, Fenelon Twp., Victoria Co., several years ago. This pipe repre-

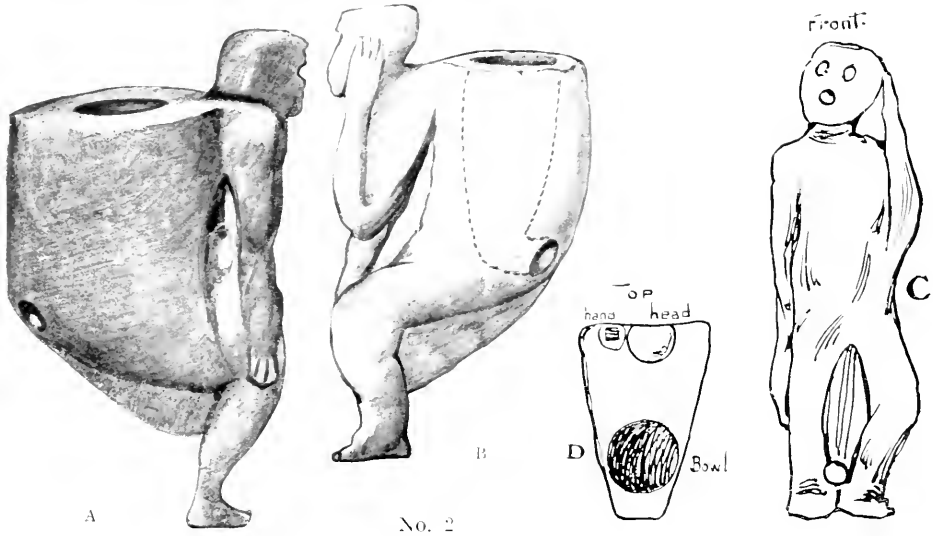


No. 1

sents a person standing in an upright position, the body being so enlarged as to give one the impression that a burden was being carried. Material, dark grey soapstone well-polished; shows nothing but purely aboriginal workmanship of the quality that is noticed in other stone pipes from this locality. The legs are extended, being slightly bent at the knees which show creases behind. The arms

are extended and slightly bent down the sides. The features are not well defined. The eyes are broad and shallow: the mouth a mere nick: the nose flat and large, no ears. The feet are rudely defined and do not project to the front, just pointed downwards: no toes, no hands, no fingers. Head flattened at occiput, incision around forehead as if showing a béret-shaped cap, or a mode of dressing the hair. (This feature is noticed in other stone effigy pipes: see fig. 38, p. 54, Report 1902; fig. Mus. No. 9,806, p. 55, Report, 1914, and fig. Mus. No. 25,554, p. 59, Report, 1914: also in some Huron human figure clay pipes. Also Buffalo human figure pipe, p. 69, Report, 1914.) Ankles rudely defined, suspension hole between thighs, body round and basket-shaped. Length, $3\frac{1}{2}$ in., depth, back to front, $1\frac{3}{8}$ in., width, side to side, $1\frac{1}{4}$ in. Suspension hole 3-16 in. in diameter. Bowl, which shows gouge marks, $\frac{5}{8}$ in. in diameter. Stem hole, $\frac{1}{4}$ in. in diameter, is situated on the curve on lower part of back.

No. 2.—A similar pipe found by G. G. Vanstone, about 1902, on his lot, No. 2, Con. 11, Eldon Twp., Victoria Co., about $\frac{1}{4}$ mile west of site 23 where the

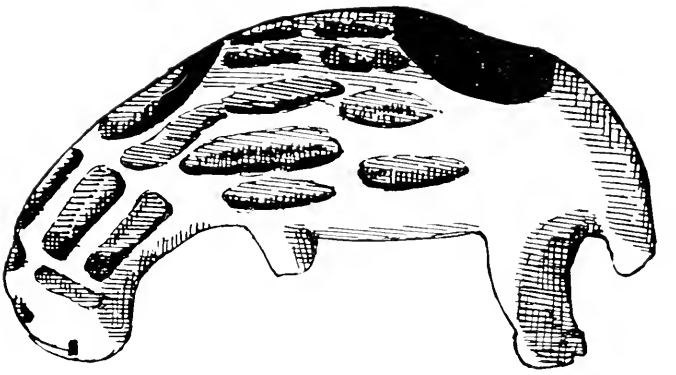


No. 2

previous pipe was found. This pipe much resembles the previous one and was found so near it that it is possible that it was made by the same person. The material is black soapstone: surface not polished to a finality and shows tool marks (gouge) especially on the belly, and on the keel, which extends from the stem hole to behind the knees. The legs are more bent than in the previous pipe. The right arm extends down the side, and the left is bent with the hand holding the side of the head. The head is rudimentary with flat top and a squarish outline. The face is flat: no nose or ears, and with shallow holes for eyes and mouth. The fingers on both hands are denoted. The feet are broken or damaged. Suspensory hole was started between ankles but not bored through, the perforation starting from the back. The design is good as in the other pipe and shows purely aboriginal workmanship. Drilled bowl showing some gouge marks. Length, $3\frac{5}{8}$ inches. Depth, $1\frac{1}{2}$ inches. Width, 1 inch. Diameter of bowl, $\frac{3}{4}$ inch. Depth of bowl, $1\frac{1}{8}$ inches. Diameter of stem hole, $\frac{3}{8}$ inch, which is in the same position as previous pipe. The three marks on the left side were made by the plough that turned it up.

These two pipes form a class by themselves, and depart from the usual kneeling or squatting position of aboriginal clay or stone human figure pipes, so far noted by the writer, by having their legs extended, which would probably serve as a hand hold similar to the projection on certain pipes described by G. A. West in his "Aboriginal Pipes of Wisconsin."

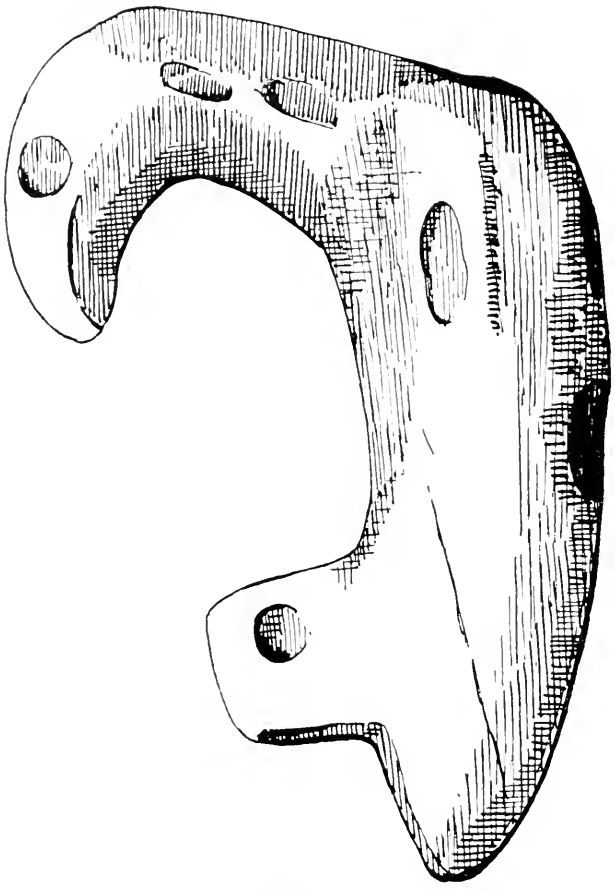
We now come to a series of effigy pipes in the Royal Ontario Museum of Archæology, Toronto, and we are indebted to the courtesy of Mr. T. C. Currelly, its curator, for the following figures and data of seven pipes from Ontario. The sketches are as near as possible the exact size of the original pipes, though the drawings were not actually measured.



No. 3

No. 3.—Animal pipe from the collection of Mr. George Allison, ploughed out on Hunter's farm, Beverly Twp., Wentworth Co. Mus. No. H. D. 846. Material uncertain, probably hard limestone; color, a pale greenish-grey, considerably polished. The forelegs (which were separate) are both broken, also the tail. The hind legs were never separate but are "en bloc." The animal is probably purely fantastic, but may be a porcupine from the general shape. It has an unusual number of large slots on its back, neck and side. The frontal bar or prolongation of the tail is broken off. The stem hole about equals the bowl hole in size. The museum numbers in these seven pipes are Royal Ontario Museum of Archæology numbers.

No. 4.—This bird pipe has been figured and described before in Report 1902, fig. 356, pp. 50-51. Also in reprint 1902, fig. 35, pp. 17-18.

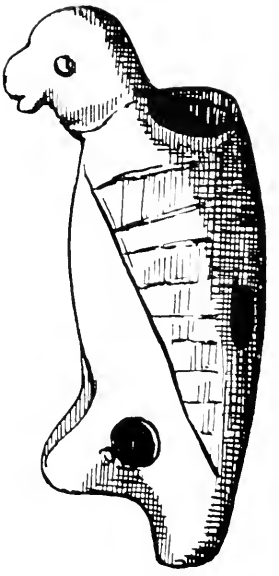


No. 4

Found on Mr. Robb's farm, 4 Con. Beverly Twp., Wentworth Co., near Troy P.O. Dark grey green slate (Huronian) with black markings.

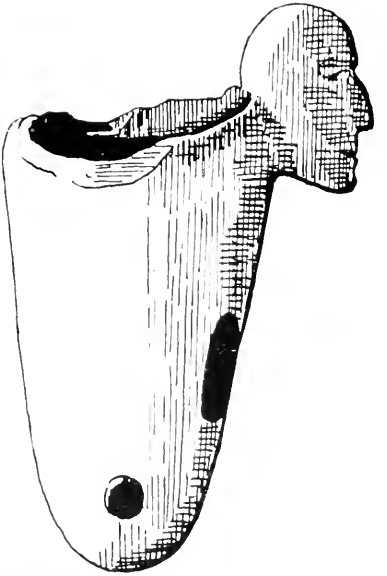
Pipe is one of the George Allison collection, of Waterdown, Ont., which was presented to above museum.

No. 5.—This bird pipe is of dark greenish slate with black markings (Huronian), presented by Mr. George Anderson, of Hawkestone, Orillia, Ont., to the above museum, and is a recent donation. The drawing is of actual size. The



No. 5

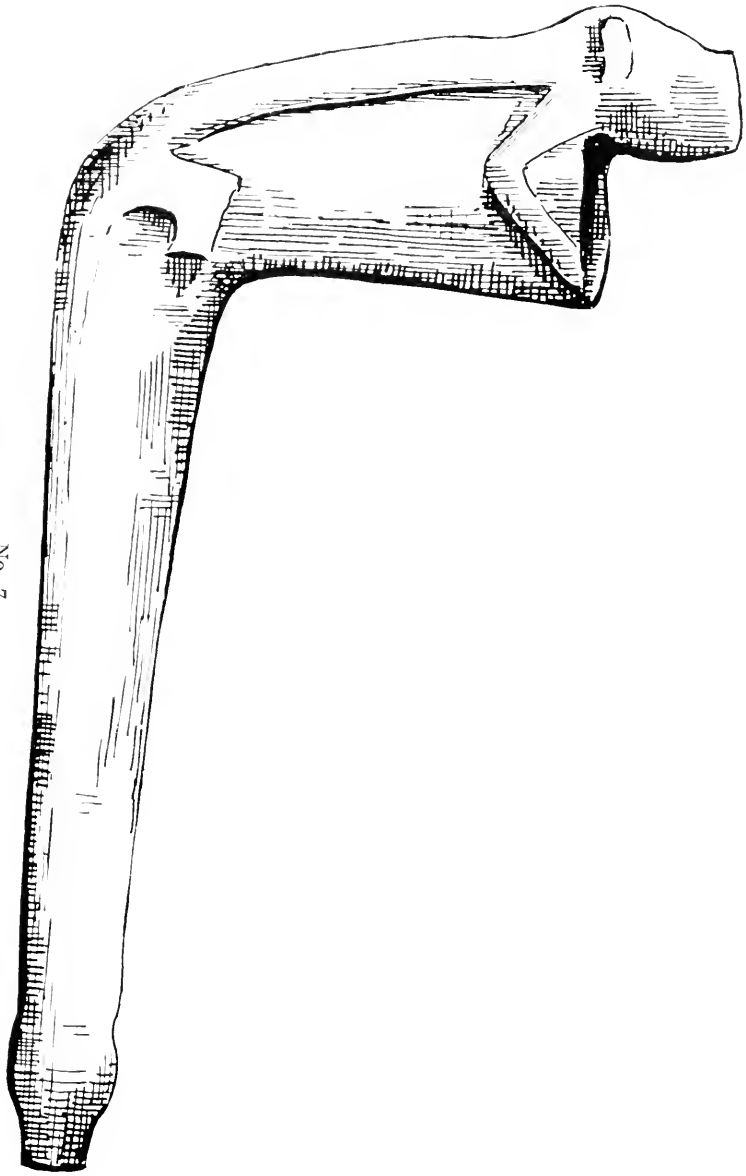
bill is peculiarly shaped and the wings are denoted by a series of incisions. There is a large suspension hole through the frontal projection. Museum No. H. D. 5,996.



No. 6

No. 6.—This pipe is a stemless bowl with a human head projected from the rim facing the smoker. From the Allison collection. Found in debris near Brantford, Ont., by a Mr. Charlton. It is of slate or argillite of a dark terra cotta colour. Has suspension hole at base. The bowl is somewhat of an inverted conical shape. Museum No. 560.

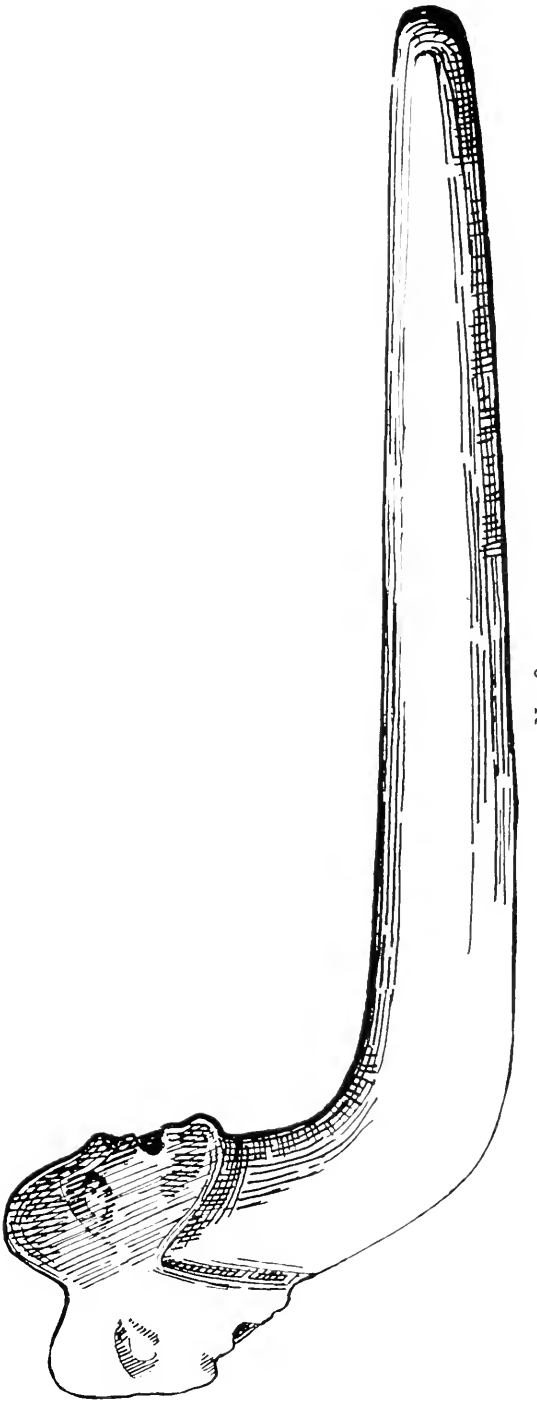
No. 7.—This is a long stemmed lizard pipe of very pale yellowish-grey limestone; Allison collection. From an ossuary on D. Cole's farm, West Flamborough Twp., Wentworth Co. Was found with skeleton, brass kettle, pottery, beads and a knife. European relics. The stem has quite an enlargement at mouthpiece. Museum No. H. D. 548.



No. 7

The head of the effigy is very heavy and may be some other animal than the lizard, which is usually represented on this kind of pipe.

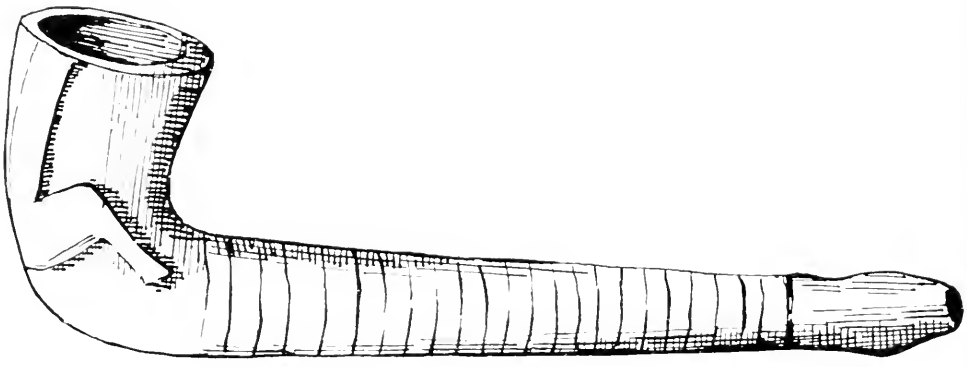
Compare with Museum No. 10,554, p. 56, Report 1914, also p. 15, reprint 1914.



No. 8

No. 8.—This is another long stemmed pipe. Material uncertain, probably a very hard limestone of a bluish-grey colour with darker and black markings; very highly polished. Has two human faces on top of bowl, rather large as compared with other pipes of same type. One face faces the smoker, the other away from him. This is the first of the double faced type that the writer has observed in stone pipes, though double faced clay pipes of the same type are quite frequent in the writer's locality and other places. The stem presents no enlargement at the mouthpiece. Was found in debris near Brantford, Ont., by a Mr. Charlton. Museum No. H. D. 654.

No. 9.—This is also another long stemmed pipe of limestone, greenish-grey in colour shading into brown at the bowl end. There is a conventionalized human



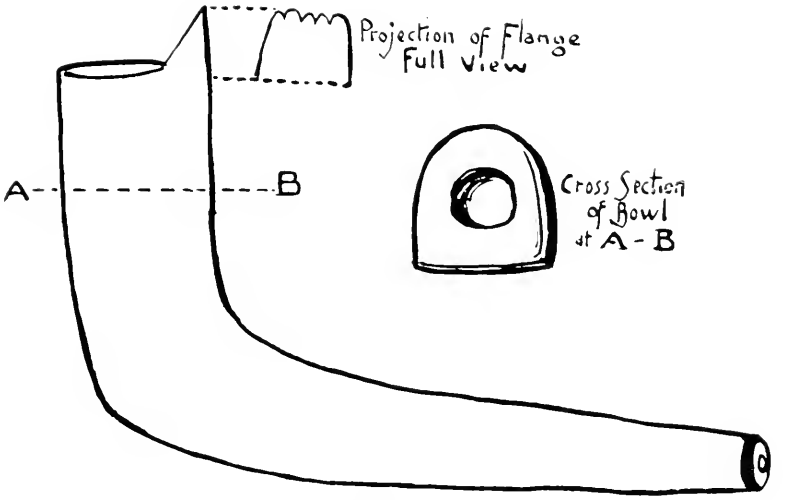
No. 9

figure in front of the bowl, but the figure only consists of the lower part of body and legs, which show no feet. The stem has 24 incised rings encircling it at nearly equal distances apart (about ⅛ of an inch).

The proximal end or mouthpiece is enlarged. From debris on Spark's farm in Beverly Twp., Wentworth Co. Allison collection. The bowl curves slightly towards the smoker while in other pipes of this type the bowls generally have a slight slant away from the smoker. The writer wishes to draw attention to the large percentage of these long stemmed pipes from the Neutral territory. See previous reports.

CONVENTIONALIZED PIPES.

No. 10.—The long stemmed stone pipes with the side of bowl nearest the smoker, projected above bowl, I take to be a conventionalized form of the pipes with a head mounted on inner rim of bowl. Several examples occur from this



No. 10

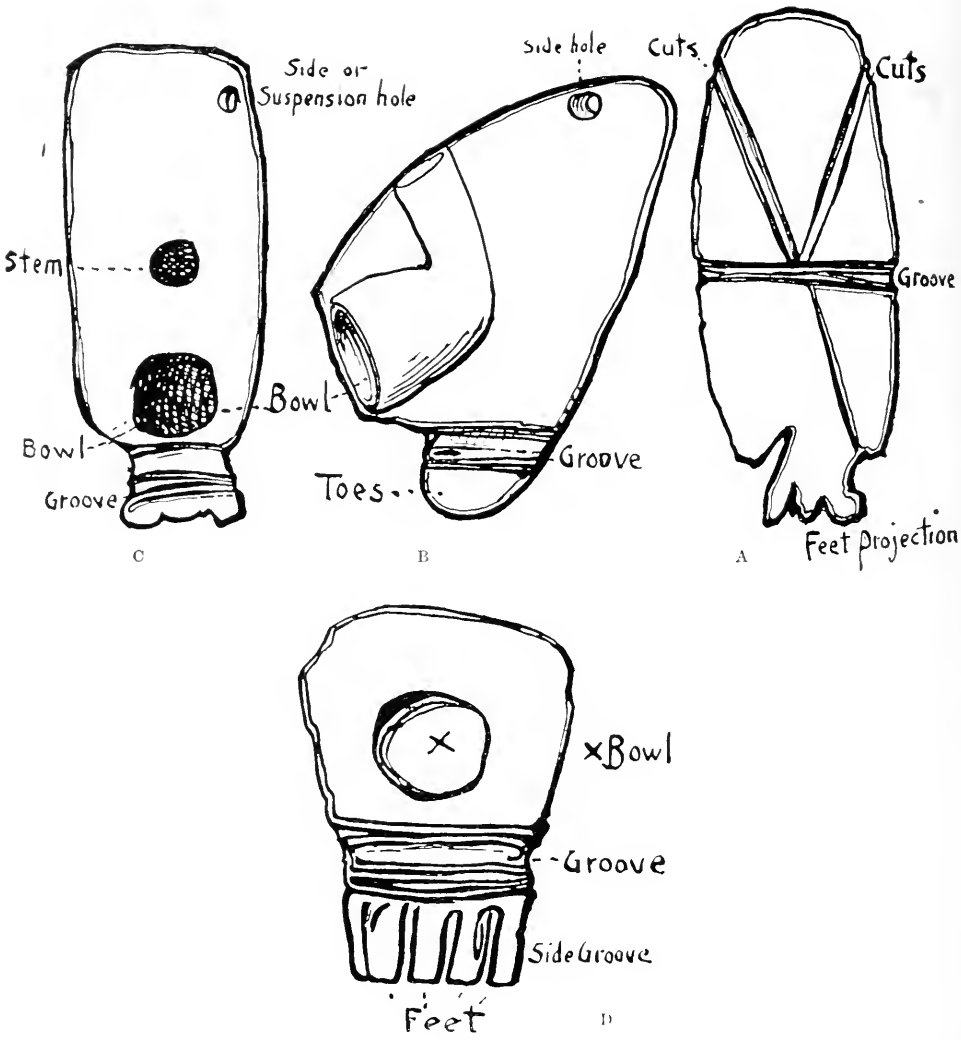
vicinity. The top of the projection has sometimes several nicks in it. The one figured here is from Clark's site, No. 23, North ½ Lot 12, Con. 1, Fenelon Twp., Victoria Co., which has produced several of these pipes and several effigy pipes. Sketch is practically full size.

THE PROBLEM PIPE.

No. 11.—The maker undoubtedly started out to make an effigy pipe of the bird form, as witness the projected feet similar to other bird effigy pipes, but through some mischance or change of mind finished otherwise. In its first stage the pipe may have become broken while being made, and finished as it now is, or perhaps a second person finished in a different style what the first person began. A bird effigy pipe was no doubt originally intended, and it still may be a conventionalized form, so this accounts for introducing it here, or alternately it is introduced to show change of workmanship, and may be called a re-made pipe of purely aboriginal workmanship. This pipe was found a number of years ago by Neil Clark, on his farm, North ½ Lot 12, Con. 1, Fenelon Twp., Victoria Co., (site No. 23).

Material: Light grey soapstone, polished, and pipe is pretty difficulty to describe. The feet are upside down with toes pointing to the bowl hole. There are several cuts transverse and oblique on the side facing away from the smoker.

Lenth, approximate, 2¾ inches. Width, side to side, 1⅛ inches. Depth, back to front, 1½ inches. There is a suspension hole in lower part of pipe.



No. 11

SOME UNITED STATES SPECIMENS INTRODUCED FOR COMPARISON.

No. 12.—Linden, Pa., Bird Pipe.

Dr. T. B. Stewart, of Lockhaven, Pa., in letters of June the 15th and 21st, 1916, gives photo and data of stone bird pipe found on old village site at Linden, 4 miles west of Williamsport, Pa., now in his collection. Material: Clay-stone. Perpendicular height, 2 15-16 inches. From back to front, 1⅝ inches. From side to side, 1 inch. Oval cross-section. Diameter of bowl, ⅝ inch. Depth of bowl, 1⅛ inches. Diameter of stem hole, ⅝ inch, which is bored with a blunt drill and is more like a "basined" hole. The bowl shows marks of gouging. Surface of pipe is highly polished. The tail is perforated with a suspension hole. The end of tail shows slight marks, evidently the ends of the tail feathers. Feet

and legs represented by two slight knobs. The head looks somewhat like an eagle's or other bird of prey. Beak not very well defined, being short and thick. Nostrils represented by two slight nicks. Mouth well defined, and on edges of upper and lower mandibles there is a series of slight nicks or serrations representing a saw-edged bill, or teeth. Two slight cuts or incisions on lower side of under mandible meeting in a V shape at the tip and are connected with tip by an upright slight incision.

A slight transverse incision is across the throat. On right side of pipe are the letters H. T. rudely scratched, evidently recently done.

No. 12

The head also has somewhat of a parrot appearance. The pipe evidently has been much used. Eyes not represented. On back side of suspension hole a series of faint lines radiate out. The mouth has an upward turn which makes the lower mandible more prominent. The nicks on the bill extend around the mouth on both sides.

Material: A light lead coloured clay-slate, or what is known as "nodular fire clay," very finely polished all over, inside the bowl as well as outside. Pipe is evidently of the same material and type as No. 30,972, p. 52, Report 1913, also p. 16, reprint 1913.

The species this pipe represents is not identified as yet. Prof. C. W. Nash, Biologist, Provincial Museum, in a letter of July 3, 1916, referring to this pipe, makes the following remarks: "I cannot even guess what bird this bird pipe is intended to represent; it is quite unlike anything we have now or ever have had, so far as I know. The marks or nicks on the bill would seem to be serrations, while the head suggests a bird of prey, or parrot. None of our birds of prey have serrated bills, nor has the Carolina Paroquet, which is still found in Georgia and some of the southern states. The Mergansers have serrated bills which are long and slender, and their heads are flat, so the pipe in no way resembles these birds."

I do not think that there is a possibility that this pipe is an unfinished bird pipe. It seems that what details it shows are finished details.

No. 13.—Animal pipe. Mr. J. G. Laidacker, of Mocanaqua, Pa., in a letter of August 22, 1916, gives sketch and data of an animal pipe found on the Grasshopper Battlefield, Nescopick, Columbia Co., Pennsylvania, about one year ago. Material: Diorite or greenish stone; no material in that section like it.

No. 13

Dimensions: Perpendicular length, 4 inches. Breadth, 1 inch. Thickness, 1½ inches. Diameter of bowl across orifice, ¾ inch. Depth of bowl, 1¼ inches. Highly polished and every detail brought out. The head is shaped very much like fig. 19 (bear pipe), p. 40, Report 1902. The effigy is of a short tailed animal with a pointed nose and ears (raccoon), holding the bowl in its forearms. The stem portion has been broken off, also the hind legs. The legs are represented, also the feet and toes. Drawing full size. See also fig. 19, p. 5, reprint 1902.

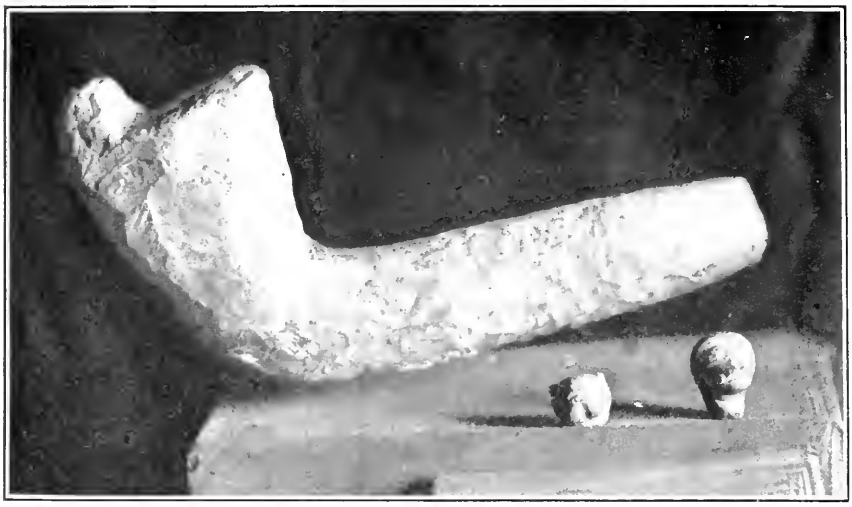
CATAWISSA BIRD PIPE.

No. 13a.—Mr. J. G. Laidacker, of Macanaqua, Pa., in letters of Sept. 16 and Oct. 16, 1916, informs me of a bird pipe in possession of Mr. Lewis S. Weingartner, Phila., but which has since left his possession. The pipe was found near

No. 13*a*

Catawissa, Pa. Material: Fine grained stone, very much like catlinite, but much heavier and shows little particles. It may be a clay-slate (ferruginous). The sketch was drawn by Mr. Laidlacker from memory and is a little smaller than the original.

No. 14.—Unfinished pipe. Mr. Theo. L. Urban, of Columbia, Pa., in letters of 22nd Aug., 1916, and 25th Oct., 1916, gives photo, sketch and data of a very large unfinished, stemmed, steatite pipe, with projecting head on front top of bowl. This pipe was found by John Hoovan in April, 1914, at a depth of about 10 inches. The spot would be about 1,000 yards from the east bank of the Susquehanna River, 200 yards north of a brook, and 500 yards west of a shell heap, which had a depth of 3 feet and a length of 300 ft., and which produced copper arrow points, potsherds, clay pipes and numerous pieces of hammered copper. The locality is near Columbia, Pa. The pipe is of green steatite. The stem from end to bowl is 6½ inches. Diameter of stem at bowl, 2 inches, and at mouthpiece, 1¼ inches. Width of bowl on side, 3 inches, on front, 2⅛ inches. Depth of bowl 3 inches. Protuberance 1 by 1½ inches. Weight, 3lbs. In the construction of this pipe Mr. Urban is of the opinion that metal tools were used, presumably a gouge which removed 1-16 inch of surface at a time. Also a second tool being used to remove the gouge cuttings, beginning the finishing operation at the end of the stem, which removed or cut shavings ¼ inch wide and 2 inches long toward the bowl. He believes that nothing but a metal tool could have done this. There is no attempt to bore either the bowl hole or the stem hole. Compare with unfinished stemmed pipe, p. 72, Report 1914. Museum No. 9,891 and p. 31, reprint 1914.



No. 14

HEADLESS BIRD PIPE.

No. 15.—Mr. Willard E. Yager, of Oneonta, N.Y., furnishes data and photo of this pipe as follows in letter 7 Sept., 1916. Length and height of specimens are measured between extremes.

No. 15

Found on the Elmore farm, on Black Creek, near North Bergen, Genesee Co., N.Y. Material: Green olive slate, striped and clouded with black (Huronian).

Length, 2⅞ inches. Width, 1 3-16 inches. Bowl, 1 5-16 inches deep by ¾ inch diameter at rim. Stemhole, 7-16 inch diameter at rim.

Pipe well polished; seems originally to have been fully and carefully finished. The rough edges left by the breaking away of the head have been well rubbed down. The bowl is double bored; stem singly. Bowl double bored, i.e., two drills have been used, one large drill for top, one small drill for bottom, not an unfrequent occurrence. Stem singly, means stem has been bored by a single drill.

Suspension hole in tail is countersunk and goes from back to front. Frontal projection not perforated. There are some large slots on the body as is usual in this type of pipe.

CRANE PIPE.

No. 16.—Mr. Willard E. Yager also furnishes data and photo of this pipe, which has already been figured before on p. 59, Report 1913, from sketch by W. M. Beauchamp, Syracuse, N.Y., and is there called a "Raven" pipe. See also fig. 6, p. 23, reprint 1913.

A

No. 16.

Found at Friendsville, Susquehanna Co., Pa., on head of Wyalusing Creek. Material: Green olive slate, striped and clouded with black (Huronian). Length, 4⅜ inches. Width, 3⅛ inches. Bowl, 2 inches deep and 15-16 inches in diameter at rim. Stemhole, ⅝ inch diameter at rim. Fully finished and dull polished. The bowl and stem hole are smoothly bored. The suspension hole goes from side to side and is countersunk. One side of the bill is serrated. No indication of white influence. The main boring appears to have been done with a solid drill and sand and water.

B

No. 16

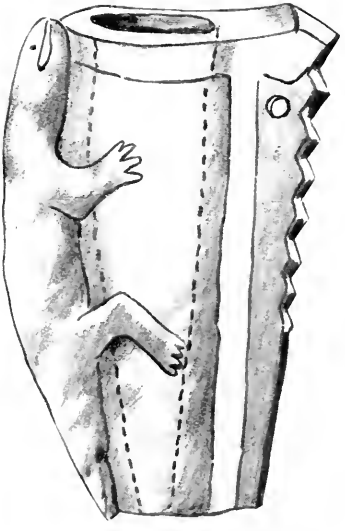
No frontal projection. There are some slots as usual around neck and shoulders, a large square on left side and eyes are bored through. These two pipes are in Mr. Yager's collection.

No. 17.—This is a stemless lizard pipe somewhat resembling the one figured on p. 52, Report 1914, and p. 11, Reprint 1914, which is from Jefferson Co., N.Y., inasmuch as it is separate from the bowl, and the head and neck projects up above the rim of the bowl. The bowl is of an elongated vase shape with rounded bottom with a suspension hole from side to side. The lizard has a row of dots down its back. The tail curls under the bowl to near stem hole. The legs are conventionalized and no feet shown. Mouth denoted, but no eyes. From Schoolcrafts

Archives of Aboriginal Knowledge, fig. 2, plate 9, opp. p. 602, Vol VI. No data given. From sketch by Mr. W. J. Wintemberg, Victoria Memorial Museum, Ottawa, Ont., 29th Nov., 1916.

No. 17

No. 18.—Is lizard pipe from Schoolcrafts Archives of Aboriginal Knowledge, fig. 2, plate 44, opp. p. 74, Vol. VI. This is evidently a stemmed lizard pipe with the stem and a portion of the base of the bowl broken off, including part of the tail of the lizard. The lizard is not separate from the bowl. The lizard's head



No. 18

does not project above the bowl. The toes are denoted, also mouth and eyes. The bowl has a longitudinal projection, or keel, on side facing smoker or opposite to the lizard. This keel has a suspensory hole near the top, and the top front of keel has a series of serrations, 7 in number. Sketch is by Mr. W. J. Wintemberg. No data is given except that the pipe is said to be of stone and comes from Camden, South Carolina. It is also mentioned in History Conditions, etc., Indian Tribes, Schoolcraft, and figured in Vol. II, fig. 2, plate 44.

EAGLE PIPE, LORAIN, OHIO.

No. 19.—Mr. P. A. Bungart in letter of 13th Dec., 1916, furnishes data and photos of an eagle pipe in his collection. Pipe was found on village site on farm of Mr. Jacob Allen, Sheffield Twp., Lorain Co., Ohio. The pipe was found in two

No. 19

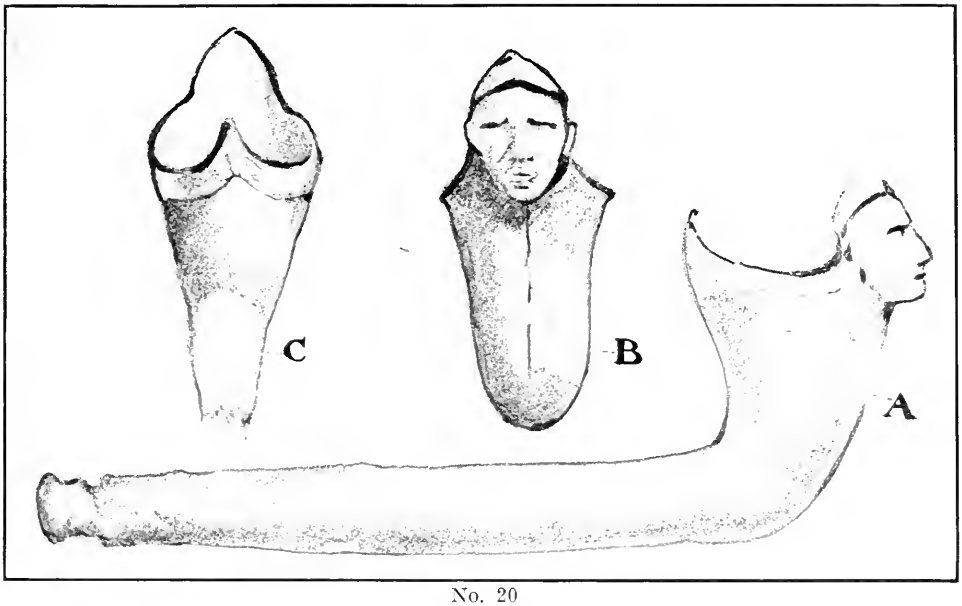
parts, the first part, which comprised the head and body, in 1897, and in 1905 Mr. Bungart found the base about 100 feet from where the first part was found. Material: A very dark brown, almost black slate (?). It has been highly polished and is an exceptional piece of workmanship. The head and beak are well formed. Three claws are represented on each foot. The feet are closed as if on a perch. The wings are clearly outlined as shown in drawing. There is a transverse suspension hole through frontal projection. The eyes are small, circular depressions. The bowl and stem holes are conically bored, the latter slightly inclined upwards.

The pipe is 3 inches in height and 2¾ inches from tip of beak to back above the stem hole. Diameter of bowl, 9-16 inch, of stem hole, ½ inch. Depth of bowl, 1¼ inches. Bowl has been drilled with tools of different sizes, as is evidenced by rings in the lower part.

LATE ADDITIONAL.

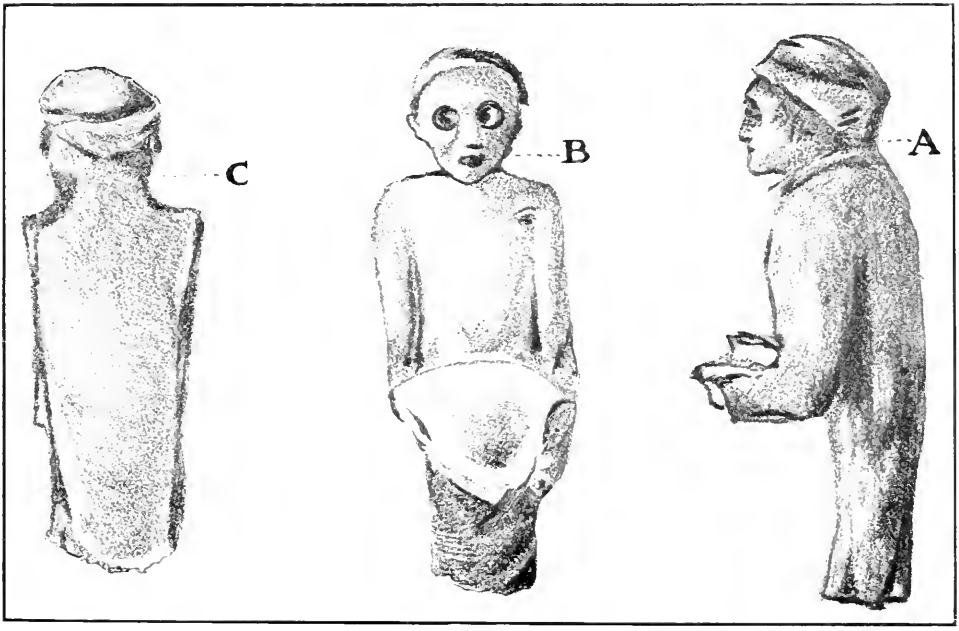
Mr. Frank S. Wood, of Hamilton, Ont., in letters of Jan. 29th and Feb. 2nd, 1917, gives data and sketches of two stone effigy pipes in his possession as follows:

"No. 20. Very finely made, long stemmed pipe of a brownish drab stone. Length, 5¼ inches. Height, 2⅛ inches, with human head on front rim of bowl



No. 20

facing away from smoker, the portion of the rim next to the smoker is raised to a peak. The features are very clear cut Indian features. The end of stem is teeth worn." Grave find in Wentworth Co., Ont., by Mr. Frank S. Wood.



No. 21

No. 21. "Human figure pipe, broken. Is of a dark greenish stone, and what remains of it is 3 inches high, very nicely shaped. The eyes are deeply drilled, also holes in the ears. There is a space behind the bowl and two perforations between the arms and the fragment of the bowl, which was held on or between the knees. This pipe was probably similar to the Grand Island Pipe, p. 69, Report 1914, and p. 28, Reprint 1914." Pipe was a surface find in Wentworth Co., Ont., by Mr. Frank S. Wood.

NOTES.

Referring to the Malecite pipe, p. 59, fig. 3 Report 1915, also fig. 3, p. 4, Reprint 1915, Dr. Speck gives the additional information in a letter of 5th Feb. 1916. "That the Malecite and Penobscot regard this type of pipe as a very old form and that the lizard is not a lizard, strictly speaking, but a salamander (Spelerpses ruber), 'Red Triton,' and has been identified as its likeness by a Malecite. The native name of the species is 'Akkadalak,' and is considered, erroneously of course, poisonous."

Mr. Alanson Skinner, of the Heye Museum, N.Y., in a letter of Aug. 3rd, 1916, expresses the following view: "All Pennsylvania effigy pipes that I have seen are attributable to the Andastes, otherwise called the Conestogas, an Iroquoian people, who seem to resemble the Eries."

Quoting from a letter of June 12, 1916, from Mr. A. McG. Beede, Sioux missionary at Cannon Ball, North Dakota, as follows: "Sinte-sna-mani, the last survivor of the old Medicine Society, is now making a sacred pipe (the stem only is sacred, as Sioux consider matters). He does his work secretly, but lets me into his secret. It is a lot of work to make a good 'sacred pipe.' The carved effigies are as follows, from the bottom up, (a) an alligator (an alligator and a lizard are the same to a Sioux Indian), (b) a deer, (c) a bear, (d) a buffalo, (e) a tortoise.

"He says one of these animals is as sacred as another of them and 'all animals are equally sacred.' He says he puts these animals on the pipe in the order historically in which they were each the most helpful to the ancestors of the Dakotas in their 'sacred community living.' He says they once lived in a place where the alligator skin was so important to them that they would have been miserable without it. Then where the deer was equally important to them for its meat and its skin. Then in the country of bears (who were formerly plentiful along the Missouri River). This old man is a Hunk-pa-ti Sioux, and his people lived close to the Mandans 184 years ago, and were agriculturists.

"The buffalo, though sacred to the Mandans and the Hunk-pa-ti Sioux, had never the sacredness to them which it had to the Teton Sioux. He says the tortoise was always 'holy' to all Siouan people because of its 'holy power to make human fertility.' . . . The old Hunk-pa-ti sacred pipe stem was about 10 inches long, and a reed was sometimes used with it. I gave to the North Dakota Agricultural College one of these 10 inch stems with the written ritual for using it, in a circle of 7 men (they may be more than 7, but not less than 7)."

"Pipe No. 5 (Report 1915). 'Animal pipe' the Indians say is a 'bear pipe.' They all say this, and say they used to see such pipes, but did not themselves make

them. All Indians here unhesitatingly call No. 7 an 'otter pipe,' and say they have seen such pipes, but did not themselves make them. It is remarkable that while the otter was the most mystically 'sacred' of all animals to the western Sioux, they did not, so far as I can learn, put his image on pipe stems. Otter skins brought fabulous prices at times. For good luck otter strings were tied into the hair. The alligator (and the lizard his brother) is used here among some of the old Sioux with 'superstitious motives,' by women; but the men speak of it as having formerly a charm in connection with 'sacred community living.' Since first writing you I have found many cases where the lizard (alligator) is secretly used as a superstitious charm in such a way as to prove that it has been for a long time a superstitious emblem. The Hunk-pa-ti also have an old legend about a woman being turned into an alligator and swimming off towards the ocean down the Missouri River."

The writer has noted amongst the Sioux of Fort Qu'Appelle, N. W. T., about year 1882, small lizard effigies made of buckskin and beaded over, said to contain the umbilical cord of a child. These were used as charms by the squaws to prevent them becoming pregnant to a lizard while they slept. I could not ascertain whether this lizard was a real lizard or a spirit (or ghost) lizard that they were afraid of.

That the lizard was held in superstitious regard by the Algonquins is noted by Miss Amelia Paget in the "People of the Plains," p. 100 (1909). "During the summer no stories founded on fiction were ever told; the Indians, with their intensely superstitious natures, believing that if any 'fairy' tales were told during that season when they were supposed to use all their time to the very best advantage, the narrator would have his or her life destroyed by the lizard, which would suck all his blood. The Indians were very naturally in terror of this little reptile, which was never actually known to have been the cause of any loss of life among them; but they assert as a reason for this that no Indian ever gave it an opportunity to put to the test its evil powers." The above has reference to the Crees around Fort Qu'Apelle, N. W. T.

In regard to the Blackfeet, Walter McClintock, in "The Old North Trail," p. 97 (1910), mentions the "Lizard Song" as one of the women songs, and on p. 111, in description of the Beaver Medicine Legend, mentions: "The turtle could not dance and had no song, but is represented in the 'Bundle' because he was wise and borrowed one from the lizard, who owned two songs."

OJIBWA MYTHS AND TALES.

Third Paper.

COL. G. E. LAIDLAW.

The author is sorry to inform his readers that John York (Kitchie Penasee—Big Thunder), from whom many tales were got, died at Rama Reserve in April, 1916, aged 97.

According to letters received from those to whom copies of Reprints of Ojibwa Myths and Tales, from Ontario Archæological Report, 1915, were sent, these myths and tales resemble somewhat those from several other places, viz:—

T. Hugonard, O.M.I., Qu'Appelle Industrial School, Lebret P.O., Sask., letter of 13th June, 1916, says: "The Tales and Myths are pretty well the same as among our Indians (Crees and Saulteaux). They have also Nanapus (Nanbush), Windigo (Giants) and the Thunderbirds.

Mr. J. T. Reader, of Calumet, Michigan, letter of July 13, 1916, says: "I can confirm several of these tales by repetition of some of the local Ojibwa Indians."

Mr. H. A. O'Leary, Brooklyn, N.Y., letter of 13th July, 1916, says: "I have read with much interest the 'Ojibwa Myths and Tales.' From what I can recall of the Eastern Algonquin legends of my old neighbours, the Micmacs and Malecites, as related in the books of Leland and others, there is considerable family resemblance running through many of the stories."

Nanbush (I use local Rama name) seems to be practically the same as the Eastern Algonquin Glooscap: The Middle Algonquin Wesse-ke-jak (Canada Jay or Whisky-Jack), Michabo (The Great Hare), and Shingibis (The Diver or the Loon); the Western Algonquin (Blackfeet) Napi (The Old Man). Inasmuch as he is a mystical person, culture hero, scape-goat, or joker, as the case may be, he appears in all these rôles in the different bands of Algonquin peoples from the Atlantic seaboard through the Great Lakes region across the plains to the Rockies.

The writer has taken no little trouble to list the variants of the name Nanbush and authorities as per following:

Nanabozhoo.—Peter Jones (Kakewaquonaby), History of the Ojebway, 1861, pp. 32-35. "(Meaning now lost) was a great man endued with the spirit of the gods; made the world and Indians, was the chief personage in their history of the flood, and now sits at the north pole overlooking all the transactions and affairs of the people he has placed on earth."

Manebojo.—C. M. Barbeau. Huron and Wyandot, Memoir 80. Geological Survey, Ottawa, Ont., 1915.

Nanibozhu.—A. F. Chamberlain. *Journal of American Folk Lore*, July-Sept., 1891. Nanibozhu amongst the Otchipwe, etc., p. 193.

Nenebuc (c soft).—Dr. F. G. Speck, Myths and Folk Lore of the Timagami Ojibwa, Memoir 70, Geological Survey, Ottawa, 1915, p. 28.

Nenebojo.—Paul Radin. Some Myths and Tales of the Ojibwa of South-eastern Ontario, Memoir 48, Geological Survey, Ottawa, 1914, p. 1-22.

Also, Literary Aspects of North American Mythology, Museum Bulletin 16, Geological Survey, Ottawa, 1915, p. 9.

Nanabojou.—Robert Paudaush. The Coming of the Mississagas (prepared by J. Hampden Burnham). Ontario Historical Society Report, 1905, Vol. VI, p. 10.

Manabuzhoo, Nanaboozhoo } Foot-notes to the preceding entry.

Na-na-bou-jou.—Louis Falge, M.D. Indian Remains in Manitowac Co., Wis., p. 146, Vol. 14, No. 4, the Wisconsin *Archæologist*, Dec., 1915. This being the name of a village named after a chief in 1804-5.

Nanabush, Nanbush } Used by Peter York, Ojibwa, Rama Reserve, Ontario Co., Ontario Province, 1915-16.

Nay-na-push, Nay-nu-boo-shoo } Amelia M. Paget, The People of the Plains, 1909, p. 165.

Wā'nībozh'ū, Nānībozhu } A. F. Chamberlain, Tales of the Mississagnas, *Journal of American Folk Lore*, Vol. III, No. IX, Ap-June, 1890, p. 150.

Nanapus.—T. Hugonard, O.M.I. Letter of June 3, 1916, Qu'Appelle, Indian Industrial School, Lebret P.O., Sask.

Nanabush.—The *Mail and Empire*, 16th Feb., 1916, a court case, Georgian Bay Indian; present-day names Allan Nanabush and Alex. Nanabush. No answer followed letters of enquiry.

Nénapuc (c soft).—Alanson Skinner, Plains Cree Tales, *American Journal of Folk Lore*, Vol. XXIX, No. CXIII, July-Sept., 1916, p. 348. Used by the Crees at Broadview, N.W.T.

Nänabozhu, Nanibozhu } William Jones, Ojibwa Tales from the North Shore of Lake Superior, *Journal of American Folk Lore*, Vol. XXIX, No. CXIII, July-Sept., 1916, p. 389.

Manibozho.—By Delewares.
Nanabozhu.—By Ojibwas.
Wanibozhu.—By Mississaugas.
Naniboz.—By Saulteaux of the north.
Manibush.—By Menominees.
} See p. 438, Canadian Savage, by John MacLean, Ph.D., 1896, who was known personally to the writer.

Menabozho.—Mary Catherine Judd, Wigwam Stories, 1902. Preface and p. 223, etc. Miss Judd states that "The various names of Missaba, Mesaba, Michabo are merely English or French renderings of the same Algonquin word."

No. 30.

The Bad Old Man and the Girl.

Told by John York.

A long time ago in a little village of Indians lived an old man who was a very bad old man for girls, when he got a chance he would take a very small girl away back in the woods and would keep her there till she got big, and then would begin to use her badly.

This old man always passed as an old woman and wore women's dress, and the girls always believed that he was an old woman. One time he took one of these girls to go out hunting porcupines. There were no guns at that time and only clubs were used in hunting porcupines. They saw a porcupine in a tree and he

told the girl that he would go up the tree and knock the porcupine down. He went quite a long way up the tree and somehow he missed his footing and fell to the ground. Well, he fell in such a way that the girl saw that he was not an old woman.* When he got up he asked the girl, "What way he fell." The girl said, "I did not see what way you fell, I only looked at the porcupine." Well, the old man was satisfied with this. One morning when the girl woke up she found some beads on her breast, so she asked the old man what it meant. "Well," he said, "somebody wants to marry you." She thought that there was nobody around close by that would marry her only the old man, for she never saw anybody since she was taken away when she was only a little girl. The old man also told her that if she found some blue beads with one yellow one in the middle that that meant she was to get married right away. She was troubled over this, and one day when the old man was away hunting she got ready and packed up some of her things and ran away. When night came she camped alone. The next morning she started very early and that evening she made a little camp and slept well all night till about daylight, when she got up and made up her mind to trick (give a trick to) the old man whom she knew would come after her. So she got some old logs and fixed them in shape of some one laying asleep, and which she covered with some of her clothes, then she defecated over the supposed sleeping girl. By this time the old man got to the little camp before daylight and a short time after the girl had started out. He said, "You might go a long ways, but I go there too." He began to lay down by the supposed girl, but soon found that he was all over filth. He began to wash his buckskin clothing which gave the girl a good chance to get a long way ahead; while the girl was running she saw some tracks which she followed till she came to four hunters to whom she told her story. One man said, "He will get here in a short time, so we will cut your hair short and put some of our clothes on you, and this will fool the old man, for you will look like a boy." When the old man came up to them he asked them, "If they saw a girl here?" "No, we never saw a girl here," said one of them. The old man looked at the boy and all over but could not find the girl. This beat (fooled) the old man.

Note.—York says that in the olden time if a girl found beads on her breast when she woke up it meant that the giver wanted to marry her. G. E. L.

No. 31.

The Christian Indian and His Pagan Wife.

Told by John York.—A true story.

One time not very long ago there was a very good Indian who lived a Christian life, but who had a wife that would not believe that there was Christianity, and would not listen to her man when he was making prayers in the morning and evening.

They had two very small children, one about one year old the other about two years. When the man was making prayers the little ones would kneel down with him. One night this man had a dream, and this dream was, that one day very near at hand something was going to happen to their place (home) about one minute to twelve o'clock at noon, and which also meant that the woman was going to turn to be a Christian. Somebody had told him in the dream that his house was to be on fire, so he prayed all the time that his children might be spared.

*"Saw everything the old man carried," York's expression.

He went out to the bush in the morning the same as usual, and about eleven o'clock he prayed for his baby (or babies) to be spared out of that fire. Near noon his wife came out to see what he was doing, when she came near she heard him saying in his prayer that his children would be spared. When he got up from his knees he saw his wife standing near by. She said to him, "What fire do you mean. You have said this in the morning and it gives me a lot of trouble thinking about the fire." He said to her, "You look at our house." She looked and saw the house on fire. She ran all her worth (might) to save the children, but when she got to the house it was too late, the house was all on fire. He came back to the house himself singing and praying. When he got to the house he saw his wife trying to go in the fire. He told her, "To keep away from the fire." After a while he walked a little way off, and saw his two children sitting on a little hill, but did not know who put them there. They were back inside the house when his wife left to see him in the bush. When his wife saw that the little ones were living she knelt down and prayed for the first time in her life, and they both claimed that it was God who put the children away when the house was on fire, for there were no people near by. This made this woman to be a Christian. They lost everything they had, but in a short time had lots of things given to them by other people.

No. 32.

THE WHITE DOCTOR AND THE BIG BEAR.

Told by John York.

In the early days one time there was a white doctor living near a river. He liked hunting and one time he was out hunting small game. He had a little dog that started to bark at something. The doctor tried to take the little dog away, but the little dog would not go. The doctor was in his canoe and the dog was on the shore quite a long way from the river. The doctor got out and left his gun in the canoe, thinking it was only a porcupine. When he got to the big rock, very close by he saw a great big bear coming right towards him. The bear got so close that it touched the doctor's nose and looked at him for a long time. The doctor stepped back easy and the bear stood where he was till the doctor got close to his canoe and jumped in and pulled out. The doctor smelled a strong smell and when he looked he found that he had defecated in his clothes, and was so scared that he did not know it. This is a true story, for John York saw it happen when he was a young man. The doctor came from Lindsay, and the river was the Lindsay River (The Scugog). This story is given to show one phase of the Indian's humor at the expense of the white man, and has a certain scientific value.

No. 33.

THE BATTLE ON TORONTO BAY—WAR OF 1812.

John York.

(Died in April, 1916, aged 97, at Rama Reserve.)

"My grandfather was one of the men who fought when the Americans came in and he told this story.

"There were a lot of them, and our side had very few men. Of course all the Indians wanted to fight before the fight took place. We got one of the American men (soldiers) that was killed and took him back to our camp, and our leader or

commander (war chief) and the warriors cut the white man to pieces, and the commander called all the fighting men to come to where he was. The first man came in to where this war chief was. The chief took a small piece of flesh of the white man and gave it to this man to eat. The man took it and ate it without any trouble. The next man came in and took one piece and ate it, and swallowed it, but in a short time the piece came out (was vomited up). Well, this man is let go home because he is no good, and all the men that swallowed pieces that stayed in their stomachs were the ones that went to fight. That is the way men were examined in those days.

"All our men (Indians) got ready on the shore and they could see the American boats coming towards where they were. The Indian leader or war chief could see the Americans getting ready on the other side, without using a glass. He said, 'They are starting out now. Get ready.' And it took a long time before anybody else could see the boats coming. When the boats came in close our men began to shoot and kept up a hot fire all day long, and killed many. This war chief stood right at the front and never was touched all day. Towards night he told his men 'To run back in the woods.' By this time the American Indians got away back of them, and our men fought hard not knowing that they were surrounded by the American Indians, and our war chief got shot from behind and fell with a broken leg, and lay for a long time till the next day. He was then shot to death by his own men to prevent him falling alive into the hands of the American Indians, and they all ran away for their lives. When the battle got through the bush was all smoke, and it took a long time to bury the dead. All the men that escaped death walked all the way from Toronto Bay to Orillia, and never got any pay from the Government."

No. 34.

Nanabush (Incomplete). (No. 9.)

Told by Jonas George.

My father has often spoken of him as having travelled about the district of Lake Superior and the country about Hudson Bay. Nanabush was travelling easterly along the north shore, Lake Huron. He saw a very large beaver. He took a large tree and tried to spear the beaver, but did not get it, only wounded it. (The beaver must have weighed about 500 lbs.) He then left the shore, after having lost the beaver, and coming east went up a rock and down the other side, when he saw a partridge which flew up with a loud buzzing roar. . . . Nanabush was still coming east many miles and sat down to rest. He heard a voice which seemed to be the voice of God saying to him that he could eat the animals about him. Nanabush thought that he would like some ducks. He called the ducks to him. They came near to him and he picked up as many as he wanted to eat. He still kept travelling eastward towards the French River. His mind seemed to be filled with thoughts of God. He noticed a vine climbing about a tree and in tasting it found that it was sweet. He thought his grandchildren could use this in the years to come. On the journey he came across Lake Couchiching, landing at Quarry Point and sat on a large, flat stone leaving an impression where he sat on the stone, which can be seen to this day (impression is about 2½ feet square and 8 inches deep). Nanabush was a big powerful man and must have been a heavy man.

Note by G. E. L.—Jonas George got mixed and forgetful at this part of the story, he forgot the young partridges and their questioning by Nanabush, also their answers, and how Nanabush changed their colour by defecating upon them. Partridges were formerly white. This missing portion prevails in other tales of Nanabush in other Algonquin bands in Ontario.

No. 35.

Belief in Witches.

R. J. Markle.

The Ojibwa Indians on Parry Island Reserve believe in witchcraft. The most intelligent of them stick to this belief. For instance, they believe a witch who is never known to the rest of the people can turn into a cat or dog, etc., and has the power, if angered, to inflict the most terrible punishment on its victim, in the disease, such as tubercular trouble, bone decay, etc.

No. 36.

Ojibwa and Mohawk—The Wild Indians. (No. 6.)

Told by John Wesley, Ojibwa, Rama Reserve, who has two Indian names, Py-ash-ē-gōb and Mŭk-kō-got.

One Ojibwa man and his son were out hunting down the Severn River some time ago. They went away for a little time, then they came back, when they got out on the lake, which is called Sparrow Lake, the old man said to his son: "You see those pine trees across the lake." The son said, "Yes." "There are about twenty wild Indians (Mohawks) right under those trees, and they already see us," the old man said. This man and his son have got to go very near where these wild Indians were hiding, which was about where the Severn River goes into Sparrow Lake. "Well, I guess we will have to face them," the old man said and so they went on. It was about sundown when the man said to his son. "They are watching us very close, when we go in the River they will follow us and you have to paddle all you are worth. We will try and get up the river as far as we can, there is a little creek about two miles above." The boy got ready and just as they went in the old man said to his son, "Now they get in their canoes to get us," so they paddled hard till they got to this little creek and paddled their canoe up to the bank which was pretty high. He told his son, "If they know that we are here as soon as they face their canoes right where we are you shoot both barrels and run away all you can go, straight south all the time till you come to our Lake" (that is Lake Couchiching). They watched the wild Indians. The old man said, "Here they come: I am going to fight all I can and will try and kill them all before they get to the shore. They are coming pretty fast." The wild Indians went by. "They never saw us," said the old man, "and I guess we are all right." The place was wild and nobody near by till they got to Washago where the first house was to be seen. They staid there all night till next morning. This man said, "We will see those men before we get to our Lake, and I guess they will watch for us at the portage." This portage was about two miles long which they had to make to get home. They went up the river anyway, they got to this portage and on to Lake Couchiching. When they got out of the river the old man said, "We are safe now, but those men are there just across the bay, we will go by close, we will see if they

are *men enough*. They will hit us with something, stones or a piece of stick. If they do that I will jump out and follow them." (Nature of a *double dare*, a *dare* on each side.) Just as they went close by the rock where the wild Indians were a little stone fell in the water. Just then the old man paddled for the shore. He saw the wild Indians running away all their worth leaving some pipes and tobacco and other things that they did not have time to pick up, which this old man took away and got home safely.

Notes by G. E. L.—The expression "men enough" or "man enough" means "brave enough" or "courageous or daring enough," or "able to do such and such a thing." "Wild Indians," in this sense, means non-Reserve Indians, or "bush Indians." The man and his son were Rama Reserve Indians. The others were probably a roving band out for plunder, but not on the war path.

These Mohawks were for robbing this old man, but were scared away when they got to Lake Couchiching by the Rama Indians.

No. 37.

Thunderbirds. (No. 3.)

Told by Jonas George.

(Another version of No. 4, Report 1915, The Big Monster Eagle Story.)

About four hundred years ago, as the Indians tell it, there were six camps of Indians somewheres in Canada. One man was newly married and was out hunting in the bush trying to catch some game. It was in the fall hunting, and he camped there all fall till the lake froze up. He hunted beaver through the ice. He cut holes through the ice to find the hole in the ground where the beaver went in. (Bank beaver who live in holes in the banks of lakes and rivers.) He hunted with a dog. This man's father heard what they said (rumours). Trouble might come at night on the ice. Might be something come on you or happen to you, so the man went to go home after dark and crossed the ice, about two hundred yards across. There was little moonlight. He got about half way over, and for just a moment he could see the moon. Something just like a dark cloud came over the moon and he heard something over his head which came down (this was a big monster eagle with wings about twenty feet long and body about eight feet wide) so this big bird (Thunderbird) caught the man in its claws and took him up in the sky and the man never knew anything for a long time, and was taken right over the clouds. This man began to wake up laying inside the big bird's claws. He has his pole (ice chisel) in his hand yet, what he used to cut through the ice with in hunting for beaver. This man is big and heavy. The eagle had long claws about twelve inches long, lots of room for the man to lay in them. This man looks up and sees a rock where the eagle goes to, a big bluff and a very high place. The eagle takes a rest on top. The eagle lets the man go. The man looks around and sees some young eagles sitting down. The man takes a "sit down" and looks at the young birds who are moving all the time towards him. The man began to be afraid of them.

The old eagle took the man for food. The man had the pole in his hand and walks towards the young birds and hit one of them and killed it, rolled it to the edge of the rock, opened the belly, took all the insides out, and went in himself. He had string to close up the opening by sewing. The man began moving and the bird fell down off the rock. He can't tell where he goes down for a long time. He

can't see anything for a long while. And when he didn't feel any moving (movement) he began to cut the string and got out and looked around. He was standing on the ice on the shore of a lake, so he went on. He goes very far and came across a snowshoe track. He went on and came to a house where someone was living. He saw an old man and woman. These people spoke and asked him if he was hungry, so he got something to eat. It was nice, and he stayed with them for a long while. The old man went out every day and came back after sun down, and the woman went out every night and came back just at daylight.

One time the old man spoke and said, "I take you home to-morrow morning." This man got on the old man's back, who walked very fast. The old man spoke, "You look out if you see any track on the snow." He looked and saw old track and the old man dropped him down.

This man went on. Travelled long distance. He came to a long, narrow place and stood up and looked around. The place was almost like where he was in the first place when the eagle took him.

This man began to know quite well where he had camped. He went a little way and began to know that he was at his landing. He saw a woman coming to the shore, an old grey-headed woman. That was his wife. He had been away for years, and his wife was very old. I think he is living there yet.

No. 38.

Ojibwas and Mohawks. (No. 2.)

Told by Mrs. Peter York, Indian name, Me-an-jo.

Once there were three Ojibwa men out in a canoe fishing. Suddenly they saw a Mohawk war canoe with ten men in it who began to chase the Ojibwas. These Ojibwas started off, the bow and stern men paddling for all their worth. The third Ojibwa man, who was a big rough fellow sat in the centre of the canoe and would not paddle. The others told him to "Pull, pull, or else we will be caught," but he would not padde. The Mohawks, though they used short paddles gained on the Ojibwas. The big rough fellow said, "Let me get in the front of the canoe." "No," the others said, "you stay where you are, and paddle for all you're worth." "If you don't let me get in front we'll all die," said the big fellow. So they let him pass up to the front. When he got there he reached under his coat and took the skin of a fish duck (Ah-zig, Shell drake) out of his medicine bag, which hung over his right shoulder. This skin had the feathers on and the big fellow held it in front of the canoe and said, "Ah-zig! ah-zig! ah-zig! ah-zig!" as fast as he could. The skin began to flap its wings and paddle its feet (in the manner of the Shell drake, skimming along the top of the water) and took the canoe along so fast that they soon escaped the Mohawks and the Ojibwas were saved.

No. 39.

The Man from the Sky.

Told by Jonas George (Wah-sa-ghe-zik).

About four hundred years ago there were five or six hundred Indians living together somewheres south from Barrie, on what is now called "Pine Plains." These Indians had a big time at that place.

Two Indians walked up and looked around those plains. They went a little ways (about 200 yards) and saw somebody sitting on the grass. This was a man, so they went to see. The man put up his hand to keep them back, so they stopped and looked. After a while the man spoke and said, "I don't belong to this land, I dropped down from above, yesterday, so I am here now." Those two men wanted him to go with them down home. "Yes," he said, "you go home and clean the place where I will stay, and come back again, then I will go with you in a few days."

The two men went home and told the people about it. They began to clean the place where they were to keep the Skyman for two days, then they went to get him. Sky man was a nice looking man, clean and shining bright. Just at sundown he looked up just like he was watching. He spoke sometimes in a clear voice. Just after dark he spoke. He said, "Stay in two days. I'll go up, something will come down and get me to go up."

This wise man said that he was running from where he came. There was an open place and he couldn't stop running, so he got in and dropped. The next day he said, "It's a nice country where we live, everything good. To-morrow noon I am going up. I will leave you, and you people all be good. Every Indian must be home to-morrow to see me go up."

Just after noon the next day he looked up and said, "It's coming." Everybody looked up but could see nothing for a long time. The man that kept Skyman at his home could see good, and saw something like a bright star shining away up. The other people didn't see anything till it came near the ground. This thing was the nicest thing ever seen in this world. Two men got hold of it and pulled down heavy, then Skyman got in and said, "All right," and away he went up happy. I guess he's living there yet.

NEW ACCESSIONS.

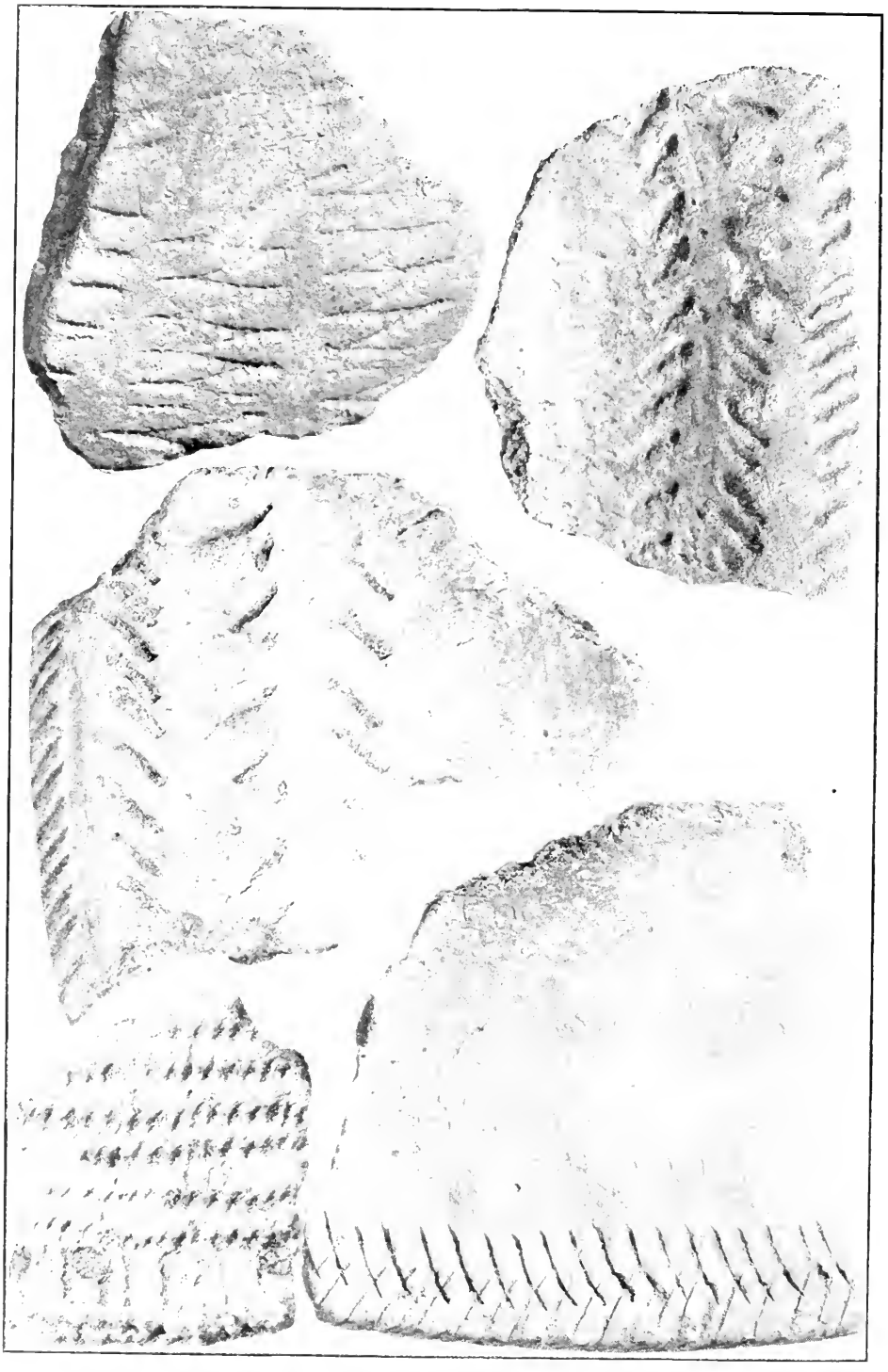
POTTERY.

The Peruvians are generally accredited with being the most skilled in the potter's art of any of the various Indian nations. The Mexican and Central American potters were not far behind them; while those of Brazil and Argentina have left for the use of the various museums some superbly decorated artifacts. On this continent we find a geometric style somewhat similar to those of an archaic class of vases found in the eastern world. The aboriginal races of Ontario manufactured pottery very extensively. Their kitchen middens are strewn with large quantities of broken pieces. The decorative cut is fairly uniform, whether Huron, Iroquois or Algonquin. Their characteristic decorative scheme is entirely linear, consisting of straight lines, zig-zags, cross lines, circles, spirals and meanders. These were systematically combined, covering at times the entire vessel, and, in rare cases, the inside as well as the outside.

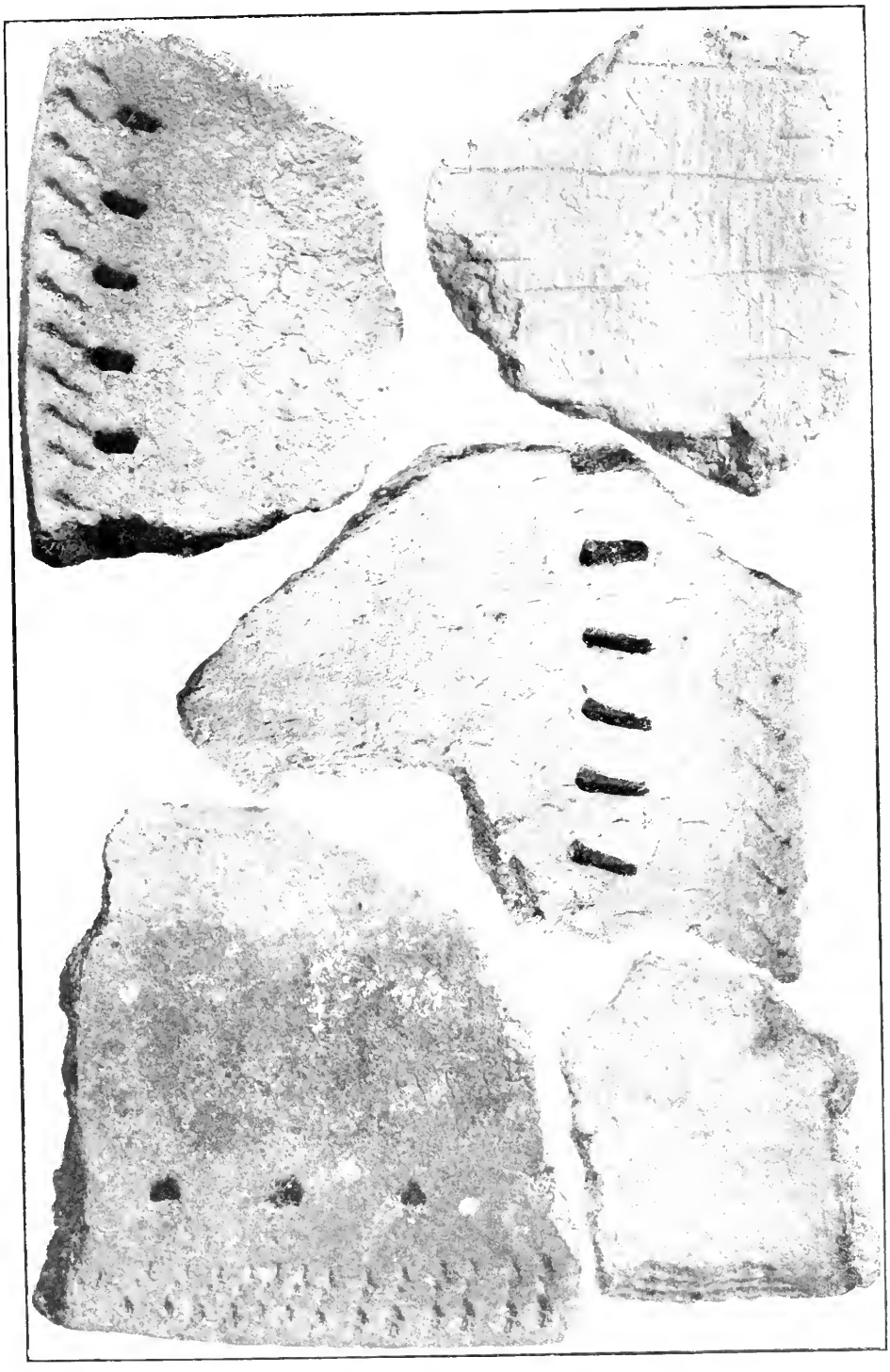
Pages 94-5-6 represent some very fine pieces of pottery in the Rathbun collection, found on his own farm, Lot 14, Concession 6, Township of Blenheim, County of Oxford. On page 94 are illustrated the outside of some pots, all of considerable size and beautifully marked. On page 95, the inside of the same pottery is shown, the marking and decoration being somewhat unique. The shape and regularity of the holes made before burning are very unusual. The piece in the lower left corner shows decorations on the entire inside of the pot. In this case, the clay is much finer than in the others, with very little matrix.

On page 97 are illustrated the fractured surfaces of this pottery, showing the dark, almost black, material with lighter and all-clay covering on the outside. The interior portion of this pottery was made with pulverized quartz-stone or mica, and, with the addition of some bituminous material, constituted a matrix quite as hard as asphalt. All the pottery in Ontario, from Algonquin, Attiwandaron or Huron source, shows a similar method of interior construction. In the designs decorating their pottery we find great variations. Evidently the whim of the potter was his guide in decorating.

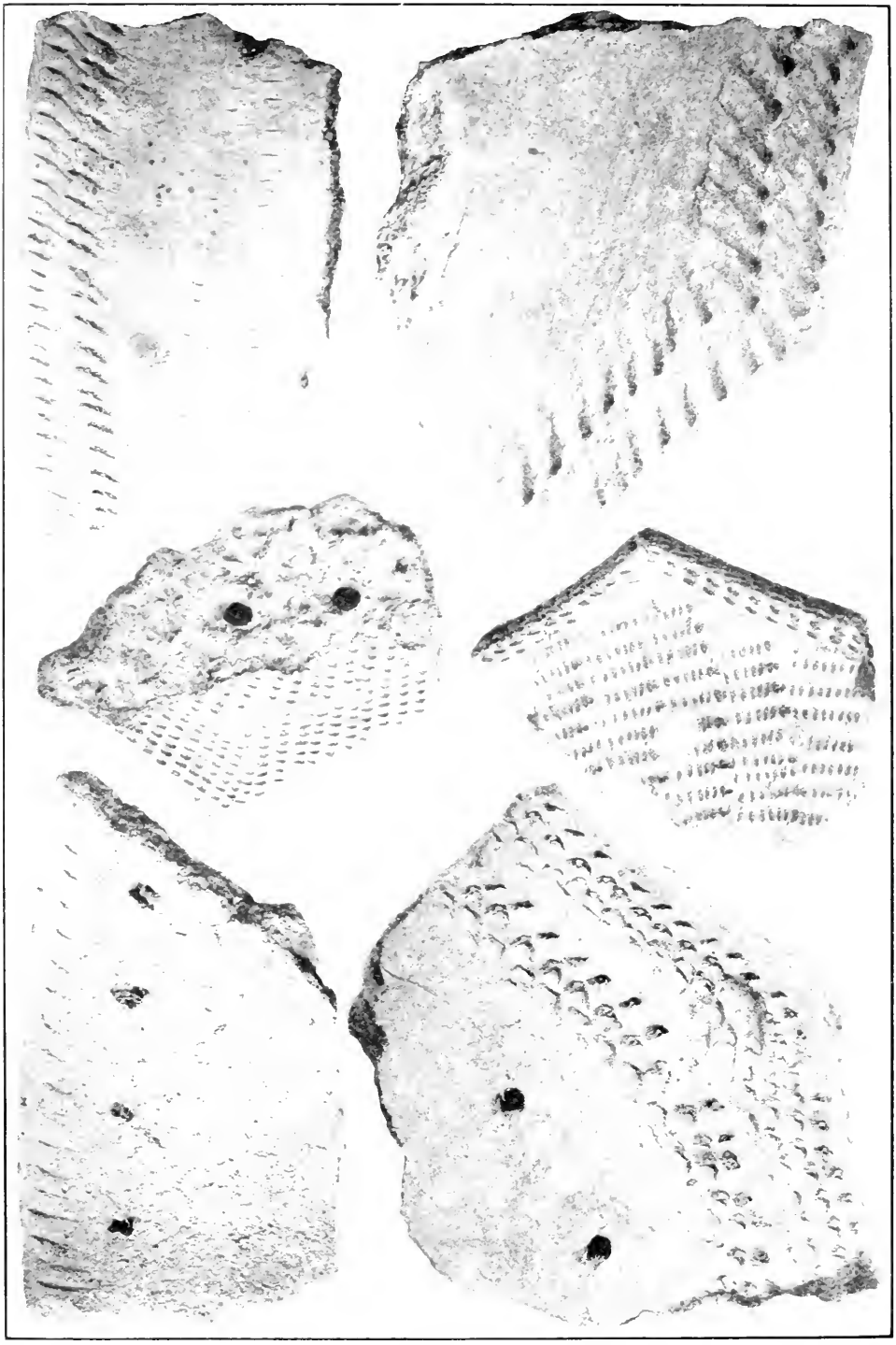
On pages 98 and 99 are some pieces of Mandan pottery presented to the Museum by E. R. Steinberg, Esq., of Mandan, N.D., U.S.A. This pottery is not only very old, but well preserved; much thinner than Ontario material. It is beautifully decorated, some of which was evidently done with cords twisted hard and pressed into the soft clay.



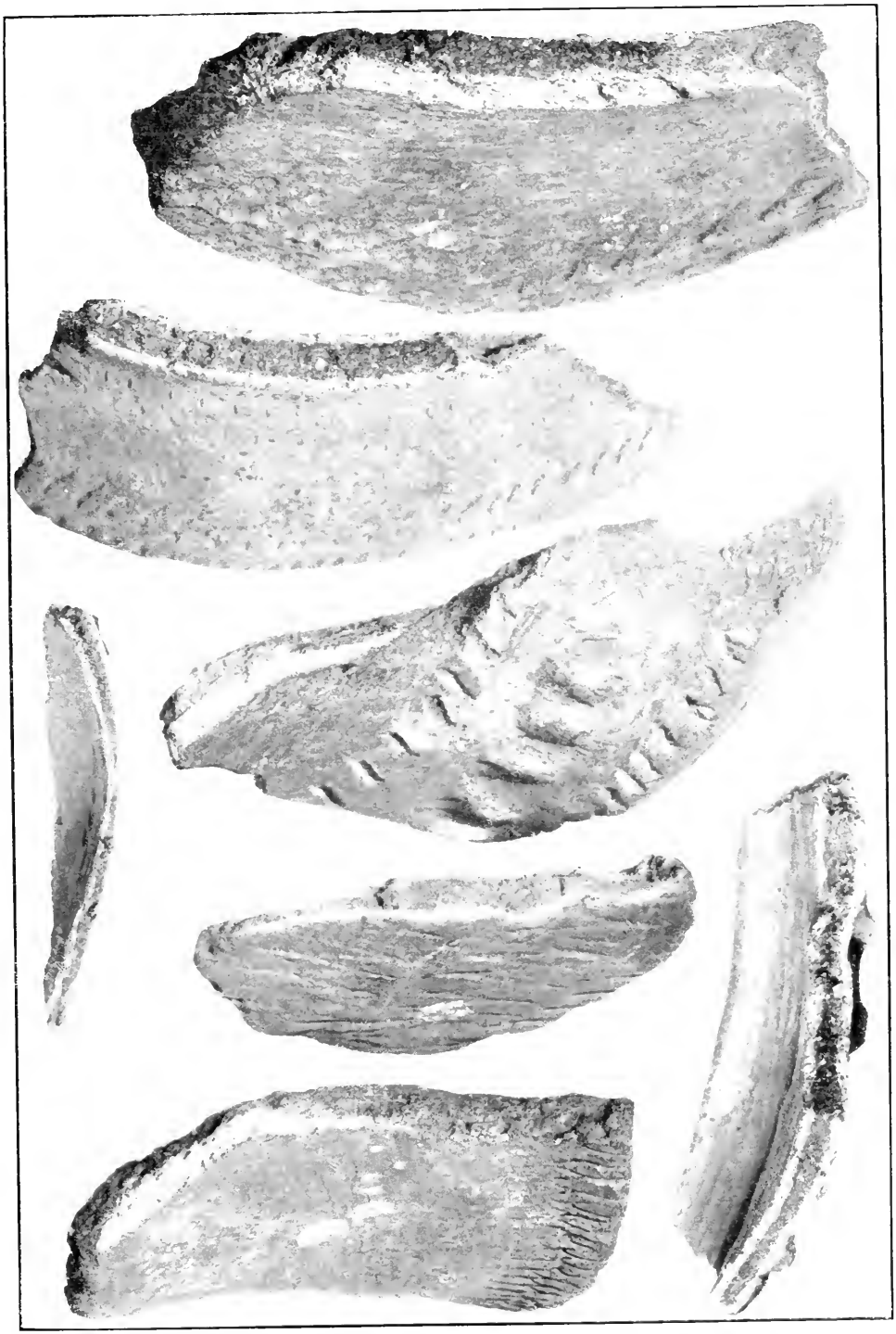
Outside of Pottery shown on page 95.



Inside of Pottery shown on page 94.

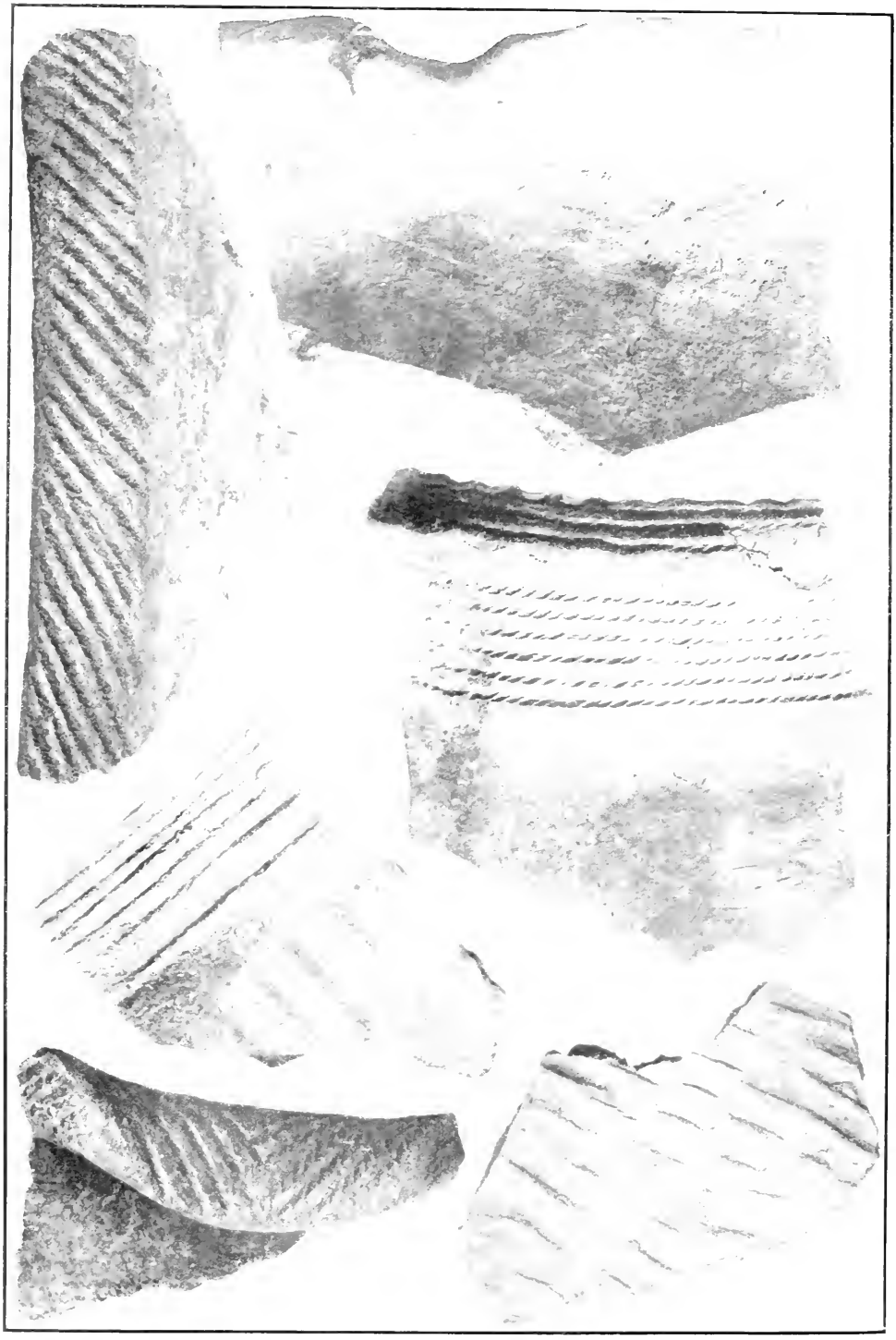


Three lower pieces with holes are inside of Pottery; upper three outside of same.

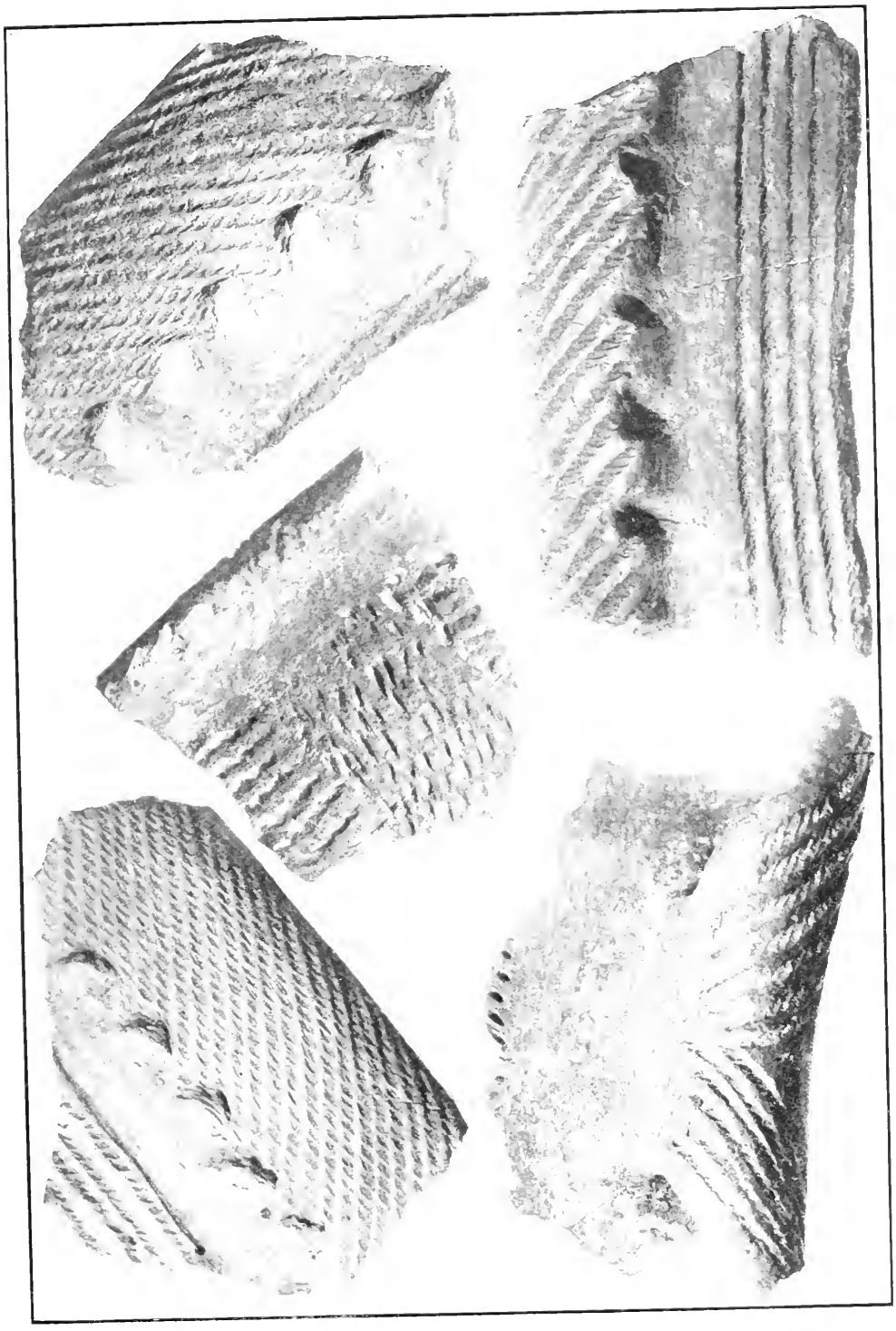


Broken edge of Pottery, showing dark matrix.

7 A.



Mandan Pottery, North Dakota, U.S.A.



Mandan Pottery, North Dakota, U.S.A.

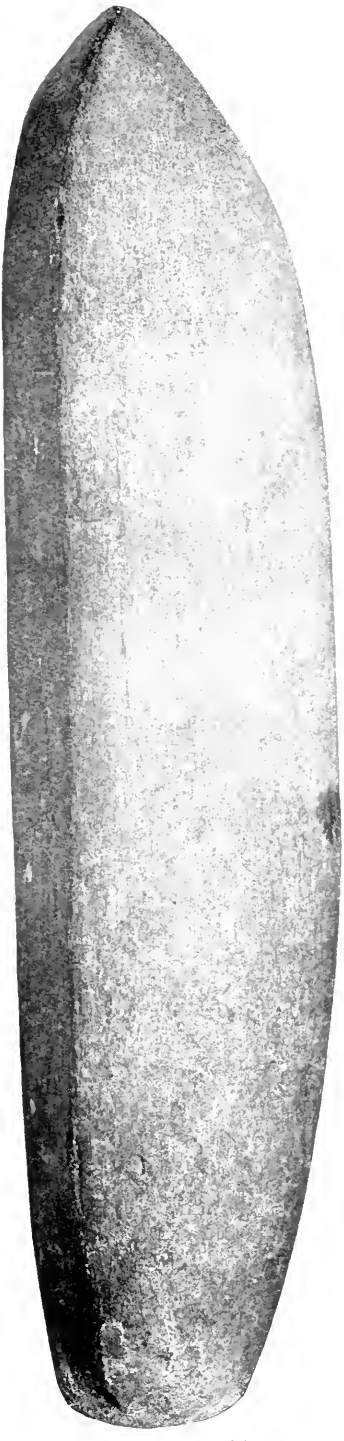
No. 3143. This clay artifact was found in the Township of Nottawasaga, and, from its general characteristics, had been used as a lamp. With a receptacle for oil, and an elevated edge for the wick, it followed in some respects the method of lamp burning as used by the Eskimo; amongst whom lamps have been in use from time immemorial. It also has a slight resemblance to the clay lamps of the eastern world, but lacks the artistic finish and uniform proportions of the same. Lamps are not supposed to have been used by the Indians of Ontario: they depended upon their camp fires and torches of pine knots for their light.

No. 3143 (full size).

No. 36505. This grooved axe came to the Museum in the fine collection presented by Mr. Rathbun. The axe weighs 8¼ ounces and the groove in front is uniform, and extends to the top. The back is rounded and very smooth. It has been chipped slightly, but not enough to disfigure. The material is of a very fine grade of slate, and it is the only specimen of its kind in the Museum. The Attiwandarons were expert workers in stone. Some of their bird amulets and gorgets are veritable works of art. A grooved axe of this kind may well have been used in some of their ceremonial dances, as it is well known many artifacts were.

No. 36504. This stone axe in Rathbun's presentation was found in the Township of Blenheim and weighs three pounds seven and three-quarter ounces. On its flat side it is very smooth; on the convex side it is most regular in outline. It was most probably used as an instrument for clearing out the burned refuse when making their dugouts. From its size one would judge that it could be used very effectively for such purpose as a hand instrument. The cutting edge is quite sharp.

No. 36505 (full size).



No. 36504.

No. 36978 in the Rathbun collection is unique. It is composed of a very dark slate, not striated. There are five concave facets, polished and exceedingly smooth. It evidently had been used for some utilitarian purpose, which at this late date could not be easily defined. Unfortunately, as the centuries go by the present Indian races have lost all knowledge of the use such artifacts were put to. A stone implement like this must have filled some very important purpose in their household economy.

No. 36978 (full size).

No. 36970. A soapstone pipe found in the Township of Dumfries, which, when in a finished condition, must have been a most artistic piece of work. The portion illustrated is only a very small part of the pipe. The stem is broken off and most of the top of the bowl has been destroyed. The drilling is purely Indian, and the flutings up the bowl of the pipe are geometrically done. This pipe, found in the centre of the Attiwandaron Country, illustrates some of the exceedingly fine workmanship done by that nation. Their excellence in the manufacture of pipes was possibly due to the large quantity of tobacco grown in the western portion of their territory.

No. 36970 (full size).

No. 36374. This red pipestone pipe in the Wm. Armstrong collection was brought by him from the western prairies during the building of the C.P.R. and was secured from a Cree chief in the neighbourhood of Regina. The favourite stone for these pipes was the red clay stone called catlinite, obtained from a quarry in south-west Minnesota, and so named because it was first brought to the attention of mineralogists by Catlin, the noted Indian painter. Catlinite is a very handsome stone, the colour varying from a pale grayish-red to a dark red. The tints being sometimes so broken and distributed as to give a mottled effect, which is well seen in this pipe. White traders have for years been manufacturing pipes from

this stone, and disposing of them to the Indians for their furs. Primitive catlinite pipes are entirely without ornamentation; though the more recent examples are often most elaborately carved, or have their surfaces inlaid with neat figures cut into the stone and filled in with sheet lead, the surface being rubbed to a uniform smoothness. In boring this stone a jasper or quartzite drill point answers very well. A wood shaft used with dry sand is equally serviceable. The shafts or stems of these pipes are usually from two to four feet long, sometimes round, but most generally flat.

No. 36374 (full size).

Peter Kalm, early in the eighteenth century, referring to this subject, says: "The old tobacco pipes of the Indians are likewise made of clay, or pot stone, or serpentine stone. The first sort are shaped like our tobacco pipes, though much coarser and not so well made. The tube is thick and short, hardly an inch long, but sometimes as long as a finger. Their colour comes nearest to that of our tobacco pipes which have been long used. Their tobacco pipes of pot stones are made of the same stone as their kettles. Some of them are pretty well made, though they had neither iron nor steel. But besides these kinds of tobacco pipes we find another sort of pipe which is made with great ingenuity of a very fine red pot stone or a kind of serpentine marble. They are very scarce and seldom made use of by any other than the Indian sachems or elders. The fine red stone of which these pipes are made is likewise very scarce, and is found only in the country of those Indians who are called Ingouez, and who, according to Father Charlevoix, live on the other side of the River Mississippi. The Indians themselves commonly value a pipe of this kind as much as a piece of silver of the same size, and sometimes they make it still dearer. Of the same kind of stone commonly consists their pipe of peace, which the French call Calumet de Paix, and which they make use of in their treaties of peace and their alliances."

There is little doubt that the red stone here referred to was catlinite.

TOTEM POLES.

Totems, such as these, are mostly made by the modern Indian for sale to white collectors. The material is black slate, found at one place not far from Skidegate, Queen Charlotte Island. No. 36367 came with the late Wm. Armstrong collection, and was secured by him in British Columbia before the building of the C.P.R.

No. 37047 was presented to the Museum by Mrs. Annie Orr, of Los Angeles, who secured the same from an old chief in Vancouver Island, British Columbia. No two of the many slate totems in the Provincial Museum are exactly alike. Those made from wood are highly ornamented. The carving in all is most regular and very neatly done.

Carved cedar poles were erected by Indians along the north Pacific coast from Vancouver to Alaska. Among the Haida they are of three principal varieties: the outside and inside house poles, and memorial columns. Besides the house poles the four main supporting posts and the two outside front corner posts were sometimes carved. The outside house pole, standing in front of the house midway between the corners, was 3 feet or more wide at the base, and sometimes more than 50 feet high, being hollowed along the back for easier handling. Close to the base it was pierced with a round aperature which served as a door, though some of the later poles were left solid, a door of European pattern being made at one side. Inside house poles were erected only by the very wealthy. They stood in the middle of the house, directly behind the fire, and marked the seat of honour. Grave posts were of many different shapes. Sometimes they consisted of a very thick post surmounted by a large carved box, which contained smaller boxes holding the bones of the deceased: sometimes the box was longer and was supported by two posts. Oftentimes, however, the body of the deceased was placed in a mortuary house and the pole, usually a tall, slender shaft, was erected elsewhere. The carvings on grave posts and grave boxes were almost always crests owned by the family of the deceased, while those on house poles might be crests, or they might illustrate stories, and occasionally a figure of the house-owner himself was added, or the figure of some one whom he wished to ridicule.

No. 36367.

No. 37047.

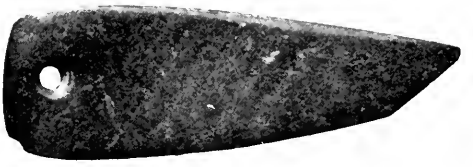
No. 36358 (full size).

No. 36358. This slate pipe was brought by the late Wm. Armstrong, Esq., from the North West Territories, and was probably of Siouan origin. The pipe is remarkably well shaped, with a neatly carved bear on the stem looking towards the smoker. From our acquaintance with totemic customs it may be inferred that the bear in this case was intended for the use of some member of a bear clan. The usual occurrence is for the animal's face to look towards the smoker. In many of the pipes of this kind in the Provincial Museum the animal faces towards the pipe-head.

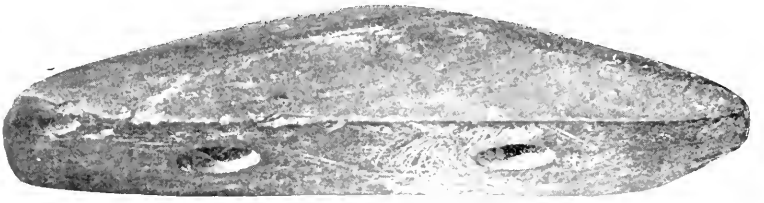
No. 36983 (full size).

No. 36983. This is a peculiarly shaped slate artifact, concave on one side, convex on the other. The concavity on one side was probably used for mixing paints. The hole on the right side is bored through, while that on the left is not. The stone is perfectly smooth as if it had been in use for a length of time. There is no other specimen of this kind in the Provincial Museum.

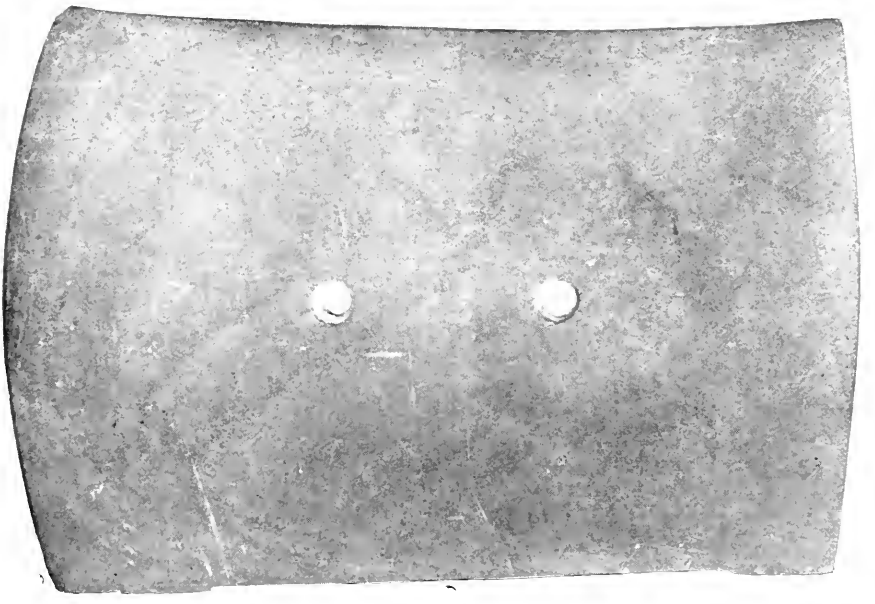
Nos. 36506, 36507, 36984 are gorgets found in the Township of Dumfries. 36506 is well made. On one side can be noticed in the photo-engravure a slight depression extending half an inch from its base to within one inch of the top where another half inch elevation occurs, above which there is another slight elevation. Why this was done might lead to a more definite knowledge of what this artifact was used for.



No. 36984 (full size).

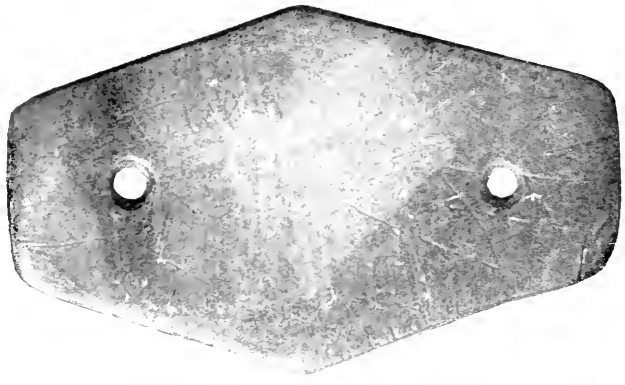


No. 36508 (full size).

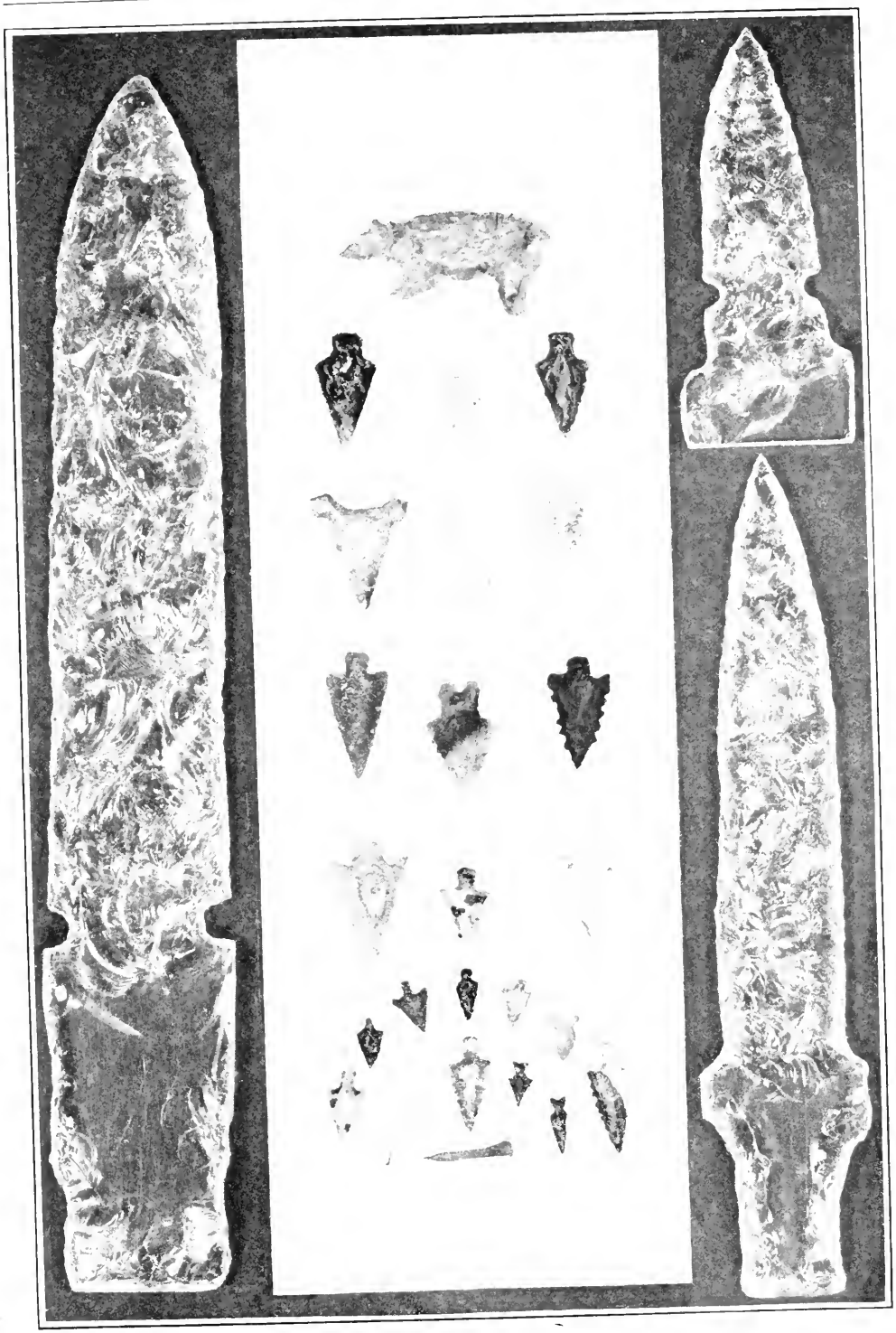


No. 36506 (full size).

No. 36507 is also well made and of striped slate. No. 36984 is an unusual shaped slate gorget. It has all the appearance of being made from some broken artifact of the same class. All these are in the Rathbun collection, and from the Township of Blenheim, County of Oxford. No. 36508 is a boat-shaped stone, perforated by two holes in the same manner as the gorgets. The holes are large and it is possible it may have been used in connection with the bow-string. The holes are not worn and have been drilled from both sides. The mark of the flint drill can still be seen.



No. 36507 (full size).



CHIPPED ARTIFACTS (nearly full size)

Glass, Flint, Obsidian, etc.; work done with bone instrument by H. L. Skavlem, Esq.

ACCESSIONS TO MUSEUM.

36339a-36407—Procured from Mrs. B. Arkle, Toronto.

The Property of Late Wm. Armstrong, Esq. (Artist).

36339a—Horn spoon, B.C.
36340a—Horn spoon, B.C.
36341a—Buckskin coat (Sitting Bull) N.W.T.
36342a—Arrows, quiver and bow, N.W.T.
36343a—Buckskin coat (worked with porcupine quills) N.W.T.
36344a—Medicine bag (beaded) N.W.T.
36345a—Heavy leather belt (beaded with sinew) N.W.T.
36346a—War club (wood) N.W.T.
36347a—War club (stone head) N.W.T.
36348a—Tobacco bag (beaded) N.W.T.
36349a—Pair beaded arm bands (loom work).
36350—Pair beaded moccasins, B.C.
36351—Pearl handled knife and beaded sheath.
36352—Beaded sheath, B.C.
36353—Police baton.
36354—Peace pipe (stone head and longwood stem), N.W.T.
36355—Esquimau dog-whip (walrus tusk handle).
36356—Saddle blanket or bag made of buckskin and beaded with sinew, N.W.T.
36357—Beaded bag (cloth) N.W.T.
36358—Slate pipe, N.W.T.
36359—Powder horn and beaded hanger, N.W.T.
36360—Pair of beaded moccasins, N.W.T.
36361—Pair of beaded moccasins, N.W.T.
36362—Belt (worked in wool) N.W.T.
36363—Pair red-beaded leggings, N.W.T.
36364—Red flannel shirt, N.W.T.
36365—Red flannel shirt, N.W.T.
36366—Sash, Edmonton.
36367—Slate totem, B.C.
36368—Pair snowshoes, N.W.T.
36369—Pair snowshoes, N.W.T.
36370—Snowshoe, N.W.T.
36371—Canoe paddle, B.C.
36372—Canoe paddle, B.C.
36373—Canoe paddle, B.C.
36374—Pipe—catlinite, N.W.T.
36375—Sword.
36376—Sword with carved bone handle.
36377—Billie, N.W.M.P.
36378—Birch-bark basket.
36379—Birch-bark box (quill worked) N.W.T.
36380—Birch-bark box (quill worked) N.W.T.
36381—Birch-bark box (quill worked) N.W.T.
36382—Birch-bark box (quill worked), (damaged) N.W.T.
36383—Basket, small.
36384—Woven box with lid.
36385—Malay Padi (rice sieve).
36386—Borneo sword and scabbard (sarong, small knife kriss).
36387-36394—Dyak reed armlets.
36395-36407—Dyak reed leglettes.

36408–36436—Procured from Mrs. Lucinda McLean, Kingsville, Ont.
(Procured in Edmonton District some 50 years ago).

36408—Fire bag—beaded.
36409—Papoose's coat—partly beaded.
36410—Pair of squaw's leggings—beaded.
36411—Squaws' hood—beaded.
36412—Black velvet bag—embroidered.
36413–36415—Borders off a large robe.
36416—Pair of large moose skin mitts.
36417—Pair of buckskin mitts—silk embroidered.
36418—Pair of small moccasins.
36419—Pair of buckskin moccasins—silk embroidered.
36420—Pair of buckskin moccasins—silk embroidered.
36421—Long pouch with three pockets—worked with porcupine quills.
36422—Pair of arm bands—worked with porcupine quills.
36423—Napkin ring—worked with porcupine quills.
36424—Small beaded pouch.
36425—Small beaded pouch.
36426—Head-dress (fur).
36427—Part of head-dress (fur).
36428—Part of head-dress (fur).
36429—Large silver medal (Indian Treaty No. 6, 1876, Victoria).
36430–36431—Arrow-heads—chert.
36432–36434—Stone adzes or axes.
36435—Buckskin coat—painted.
36436—Pair of leggings—red flannel and beaded.

36437–36438—Quiver and arrows for blow-gun, S. Africa. Gift of J. A. Woods.

36439–36813—Gift of Jno. F. Rathbun, Esq., Drumbo, Ontario.

36439–36480—Stone axes and adzes, Lot 14, Blenheim Tp., Oxford Co.
36481–36488—Fragments of stone axes and adzes, Blenheim Tp., Oxford Co.
36489–36496—Stone chisels, Blenheim Tp., Oxford Co.
36497—Fragment of rubbing stone, Blenheim Tp., Oxford Co.
36498—Stone sinker, Blenheim Tp., Oxford Co.
36499–36502—Hammer stones, Blenheim Tp., Oxford Co.
36503—Pestle, Blenheim Tp., Oxford Co.
36504—Large stone adze, Blenheim Tp., Oxford Co.
36505—Gouge, Lot 8, Con. 6, Blenheim Tp., Oxford Co.
36506–36508—Gorgets, Lot 14, Blenheim Tp., Oxford Co.
36509—Large stone chisel, Lot 14, Blenheim Tp., Oxford Co.
36510–36540—Fragments of pottery, Lot 14, Blenheim Tp., Oxford Co.
36541—Rubbing stone, Lot 16, Con. 5, Blenheim Tp., Oxford Co.
36542—Stone chisel, Lot 14, Con. 6, Blenheim Tp., Oxford Co.
36543—Lower jaws of deer, Burgess Lake Lot 14, Blenheim Tp., Oxford Co.
36544—Part of lower jaw of bear, Burford Tp., Brant Co.
36545—Deer antler, Con. 4, Blenheim Tp., Oxford Co.
36546—Slate gorget, Lot 14, Con. 6, Blenheim Tp., Oxford Co.
36547–36775—Chert specimens, arrow-heads, spear-heads, scrapers, etc., Lot 14, Con. 6, Blenheim Tp., Oxford Co.
36776—Foot bones, Con. 4, Burford Tp., Brant Co.
36777—Wampum, Brantford Tp., Brant Co.
36778—Bone awl, Brantford Tp., Brant Co.
36779–36784—Bone awls, Lot 14, Con. 6, Blenheim Tp., Oxford Co.

36785-36787—Fragments of bones, Con. 4, Burford Tp., Brant Co.
36788—Native copper implement, Con. 4, Burford Tp., Brant Co.
36789-36812—Fragments of pottery, Con. 4, Burford Tp., Brant Co.
36813—One bushel of chert chips and rejects, Lot 14, Con. 6, Blenheim Tp., Oxford Co.

36814-36817—Gift of Moses Mitchell, Esq. (Col. G. E. Laidlaw).

36814—Iron tomahawk, Site 55, Lot 54, North Portage Road, Eldon Tp.
36815—Stone adze, Site 55, Lot 54, North Portage Road, Eldon Tp.
36816—Adze or chisel, Site 55, Lot 54, North Portage Road, Eldon Tp.
36817—Adze or chisel, Site 55, Lot 54, North Portage Road, Eldon Tp.

36818-36887—Gift of H. Angle, Esq. (Col. G. E. Laidlaw).

Benson's Site No. 7, W. ½ Lots 5 and 6, Con. 2, Bexley Tp., and Carson's Site No. 3, Lots 4 and 5, Con. 5, Bexley Tp.

36818—Clay pipe.
36819—Bowl of clay pipe.
36820-36823—Stems of clay pipes.
36824-36827—Shells.
36828-36844—Gambling stones.
36845-36856—Fragments of pottery.
36857-36861—Bone awls.
36862-36867—Bone beads.
36868-36873—Fragments of bones.
36874-36883—Teeth.
36884-36886—Fragments of stone adzes or chisels.
36887—Foot bone.

36888-36963—Gift of Dr. Jas. Grant (Col. G. E. Laidlaw).

Benson's Site No. 7, W. ½ Lots 5 and 6, Con. 3, Bexley Tp., and McKague Site No. 5, Lot 9, Con. 3, Bexley Tp.

36888-36897—Fragments of pottery.
36898-36900—Clay pipe bowls.
36901-36904—Fragments of clay pipe bowls.
36905-36906—Foot bones.
36907—Bone needle.
36908-36913—Bone awls.
36914—Partly finished bone bead.
36915-36917—Teeth.
36918—Bone bead.
36919-36921—Stems of clay pipes.
36922-36935—Gambling discs.
36936—Water-washed stone.
36937—Flat piece of stone (hole drilled near edge).
36938—Stone adze or chisel.
36939-36940—Fragments of pottery.
36941-36960—Fragments of pottery.
36961—Fragments of clay pipe.
36962-36963—Stone adzes or axes.
36964—Deer antler.
36965—Bowl of clay pipe, Carson's site 3, Lots 4 and 5, Con. 5, Bexley Tp. Gift of Ben. Corson.

36966-36982—Gift of Col. Geo. E. Laidlaw.

36966—Chips from site on Lake Shore, Block C, Bexley Tp., near Trent Canal entrance.
36967—Quartz flake, Lot 23, N.W.B., Bexley Tp., Lake Shore Road.
36968—Quartz flake, Benson's site 7, W. ½ Lots 5 and 6, Con. 2, Bexley Tp.
36969—Chips from work shop site, Lot 5, S.P.R., near Grass River, Bexley Tp.
36970—Fragment of stone pipe, Clark's site No. 23, N. ½ Lot 12, Con. 1, Fenelon Tp.
36971—Fragment of pottery.
36972-36974—Fossils from Clark's site No. 23, N. ½ Lot 12, Fenelon Tp.
36975-36977—Chert specimens, Clark's site No. 23, N. ½ Lot 12, Con. 1, Fenelon Tp.
36978—Rubbing or polishing stone, Clark's site No. 23, N. ½ Lot 12, Con. 1, Fenelon Tp.
36979—Skull.
36980-36982—Box of bones.

36983-37045—Gift of Jno. F. Rathbun, Esq., Drumbo, Ont.

36983—Paint pot—slate, Lot 14, Con. 6, Blenheim Tp., Oxford Co.
36984—Small gorget, Lot 14, Con. 6, Blenheim Tp., Oxford Co.
36985-36987—Gorgets, Lot 14, Con. 6, Blenheim Tp., Oxford Co.
36988-36993—Fragments of gorgets, Lot 14, Con. 6, Blenheim Tp., Oxford Co.
36994—Part of bird amulet, Lot 13, Con. 6, Blenheim Tp., Oxford Co.
36995—Clay pipe stem, Lot 8, Con. 6, Blenheim Tp., Oxford Co.
36996-36998—Fragments of pestle, Lot 16, Con. 5, Blenheim Tp., Oxford Co.
36999—Rubbing stone, Lot 16, Con. 5, Blenheim Tp., Oxford Co.
37000—Grooved axe, Blandford Tp., Oxford Co.
37001—Grooved axe, Blandford Tp., Oxford Co.
37002-37044—Round stones of different sizes and used for various purposes.
37045—Fragment of pestle, Lot 14, Con. 6, Blenheim Tp., Oxford Co.
37046—Ornamented slate dish, B.C. Gift of John Maughan, Jr.
37047—Slate totem, B.C. Gift of Mrs. Annie Orr, Los Angeles, Cal.
37048—Stone sarcophagus from Pompeii. Gift of Victor E. Gianelli, Esq., Italian Consul.
37049—Chinese hammer for making beaten silver. Gift of Miss E. Marshall, Allenford, Ont.
37050—Pillow end, Chinese. Gift of Miss E. Marshall, Allenford, Ont.
37051—Rubbing stone, found in Exhibition Park. Gift of John Maughan, Jr.
37052—Old Indian Treaty. Gift of John Ross Robertson, Esq.
37053—Esquimau coat. Armstrong Collection. Mrs. Arkle.

37054-37100—Gift of H. S. Skavlem, Esq., Janesville, Wis., U.S.A.
(Showing process of chipping flint, and other objects.)

37054—Small piece of chert, triangular in form.
37055—Unfinished green glass point, showing how this glass can be chipped thinner; also piece of same glass unchipped and flakes from unfinished point.
37056—Unfinished glass points (blue), with chips and sample of glass before chipping.
37057—Chips from telegraph insulator.
37058—Unfinished red glass arrow-point; also specimen of same glass before chipping, showing the corrugated and uneven surface. Seemingly a very unsuitable piece from which to work out a fine arrow-point; also the finished point.
37059—Coloured glass (brown), thinned by flaking from each side.
37060—Chipped glass, showing thinning of material by flakes pressed off from flat side of glass; corners left untouched, to show original thickness of glass.
37061—Initial chipping down to thin edge. Only one series of chips taken off on each side; no secondary chipping or trimming done.

37062—Unfinished arrow-tip (glass).
37063—Is a thinned spear-point.
37064—Is a nicely finished arrow-point, except cutting off the base. If this glass was dark coloured, it would pass for a fine obsidian arrow.
37065—Is a fairly shaped and finished large arrow or small spear. Were this obsidian, it would compare favorably with the ordinary good obsidian.
37066—Were this coloured dark brown, it would be considered quite a specimen of obsidian.

CARD OF MOUNTED SPECIMENS.

37067—Chert.
37068—Chalcedony point.
37069—Chert fish-hook.
37070—Opaline and agatized wood.
37071—Moss agate.
37072—Red glass.
37073—Rock crystal, with citrine tint.
37074—Banded agate.
37075—Slag or melted glass.
37076—Trenton limestone chert.
37077—Quartzite.
37078—Local limestone chert.
37079—Obsidian.
37080—Chalcedony.
37081—Obsidian.
37082—Quartzite.
37083—Jasper.
37084—Coloured glass.
37085—Chert (local).
37086—Obsidian.
37087-37098—Arrow-points made from local flakes and pieces of chert, picked up on village site.
37099—Bone flaker.
37100—Glass arrow-head.